

Fishery Data Series No. 09-22

**Fall Season Cooperative Salmon Drift Gillnet Test
Fishing in the Lower Yukon River, 2008**

**Annual Report for Project 07-204
USFWS Office of Subsistence Management
Fisheries Information Services Division**

by

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April 2009

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative Code	AAC	fork length	FL
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	mideye to fork	MEF
gram	g			mideye to tail fork	METF
hectare	ha			standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.		
liter	L		@		
meter	m	at			
milliliter	mL	compass directions:			
millimeter	mm	east	E		
		north	N		
		south	S		
		west	W		
		copyright	©		
		corporate suffixes:			
		Company	Co.	alternate hypothesis	H _A
		Corporation	Corp.	base of natural logarithm	e
		Incorporated	Inc.	catch per unit effort	CPUE
		Limited	Ltd.	coefficient of variation	CV
		District of Columbia	D.C.	common test statistics	(F, t, χ ² , etc.)
		et alii (and others)	et al.	confidence interval	CI
		et cetera (and so forth)	etc.	correlation coefficient (multiple)	R
		exempli gratia		correlation coefficient (simple)	r
		(for example)	e.g.	covariance	cov
		Federal Information Code	FIC	degree (angular)	°
day	d	id est (that is)	i.e.	degrees of freedom	df
degrees Celsius	°C	latitude or longitude	lat. or long.	expected value	E
degrees Fahrenheit	°F	monetary symbols	\$, ¢	greater than	>
degrees kelvin	K	(U.S.)		greater than or equal to	≥
hour	h	months (tables and figures): first three letters		harvest per unit effort	HPUE
minute	min	Jan,...,Dec		less than	<
second	s	®		less than or equal to	≤
		™		logarithm (natural)	ln
		United States		logarithm (base 10)	log
		(adjective)		logarithm (specify base)	log _b , etc.
		United States of America (noun)		minute (angular)	'
		U.S.C.		not significant	NS
		U.S. state		null hypothesis	H ₀
		use two-letter abbreviations (e.g., AK, WA)		percent	%
				probability	P
				probability of a type I error (rejection of the null hypothesis when true)	α
				probability of a type II error (acceptance of the null hypothesis when false)	β
all atomic symbols				second (angular)	"
alternating current	AC			standard deviation	SD
ampere	A			standard error	SE
calorie	cal			variance	
direct current	DC			population	Var
hertz	Hz			sample	var
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

FISHERY DATA SERIES NO. 09-22

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FISHING IN THE LOWER YUKON RIVER, 2008**

by

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ii
LIST OF FIGURES	ii
LIST OF APPENDICES	ii
ABSTRACT	1
INTRODUCTION	1
OBJECTIVES.....	2
METHODS.....	2
Study Site.....	2
Project Date	3
Drift Gillnet Test Fishing	3
Drift Schedule.....	4
CPUE Calculations	4
Age, Sex and Length Sampling	4
RESULTS.....	5
Fall Chum Salmon	5
Coho Salmon	5
DISCUSSION.....	6
Fall Chum Salmon	6
Stock Composition	7
Coho Salmon	7
Stock composition	8
RECOMMENDATIONS.....	8
ACKNOWLEDGEMENTS.....	9
REFERENCES CITED	10
TABLES AND FIGURES	11
APPENDIX A	29

LIST OF TABLES

Table	Page
1. Catch and CPUE data for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2008	12
2. Historical CPUE data for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2001–2008.....	13
3. Summary of fall chum salmon age and sex data for the Lower Yukon drift gillnet test fishery, 2008	15
4. Summary of fall chum salmon length (mm) by age and sex for the Lower Yukon drift gillnet test fishery, 2008.....	15
5. Preliminary Pilot Station fall season sonar passage estimates attributed to fall chum and coho salmon, 2008.....	20
6. Catch and CPUE data for coho salmon in the Lower Yukon drift gillnet test fishery, 2008	16
7. Historical CPUE data for coho salmon in the Lower Yukon drift gillnet test fishery, 2001–2008	17
8. Summary of coho salmon age and sex data for the Lower Yukon drift gillnet test fishery, 2008	19
9. Summary of coho salmon length (mm) by age and sex for the Lower Yukon drift gillnet test fishery, 2008.....	19
10. Pilot Station fall season sonar passage estimation attributed to fall chum and coho salmon, adjusted for passage at the Lower Yukon test fishery, 2008	21

LIST OF FIGURES

Figure	Page
1. Drift site locations by station for the cooperative Lower Yukon drift gillnet test fishery, 2008	22
2. Project site locations for salmon assessment in the Yukon River drainage, 2008	23
3. Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2008 compared to the 2001–2007 average	24
4. Daily CPUE for coho salmon in the Lower Yukon drift gillnet fishery, 2008 compared to the 2001–2007 average	24
5. Daily 2008 fall chum salmon CPUE and water temperature values at Big Eddy compared to 1984–2007 average water temperature values.....	25
6. Daily 2008 fall chum salmon CPUE and water temperature values at Middle Mouth compared to 1984–2007 average water temperature values.....	25
7. Daily 2008 water temperature values at Big Eddy and Middle Mouth drift locations compared to 1984–2007 average water temperature values from handheld thermometers.	26
8. Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery compared to Pilot Station sonar passage estimates adjusted for transit time, 2008	26
9. Cumulative CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery in 2008 compared to 2001–2007.....	27
10. Daily CPUE for coho salmon from the Lower Yukon drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2008	27
11. Cumulative proportions for coho salmon from the Lower Yukon drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2008.....	28

LIST OF APPENDICES

Appendix	Page
A1. Fall chum salmon daily and cumulative Pilot Station sonar passage estimates 1995–2007.....	30
A2. Mean fishing times for the Lower Yukon drift gillnet test fishery, 2008	34
A3. Historical CPUE data for fall chum salmon at Big Eddy drift gillnet test fishery site, 2001–2008	35
A4. Historical fall chum salmon CPUE data at the Middle Mouth drift gillnet test fishery site, 2001–2008	37
A5. Species captured, retained and released during the Lower Yukon gillnet test fishery, 2008.....	39
A6. Historical coho salmon CPUE data at the Big Eddy drift gillnet test fishery site, 2001–2008.....	40
A7. Historical coho salmon CPUE data at the Middle Mouth drift gillnet test fishery site, 2001–2008.....	42

ABSTRACT

The Lower Yukon River drift gillnet test fishery project is designed to provide an index of run timing and relative abundance of fall chum salmon *Oncorhynchus keta* and coho salmon *O. kisutch* returning to the Yukon River drainage. Drift gillnets were operated from 16 July through 28 August 2008, on the Lower Yukon River near the village of Emmonak, Alaska. Catch per unit effort (CPUE), as well as age, sex, and length (ASL) composition were gathered from drift gillnet catches from the Big Eddy test fishery operated in Kwikluak Pass (South Mouth) and the Middle Mouth test fishery operated in Kwikpak Pass, upstream of Kawanak Pass (Middle Mouth) and Apoon Pass (North Mouth). The test fishery recorded a cumulative CPUE of 810.02 for fall chum salmon with the midpoint occurring on 13 August. Fall chum salmon were predominantly age-0.4 fish, comprising 55.2 % of the unweighted age sample. The cumulative CPUE for coho salmon was 226.22 with the midpoint occurring on 19 August. Age-2.1 coho salmon were the most abundant, making up 90.8% of the unweighted age sample. In 2008, the Lower Yukon River drift gillnet test fishery project provided critical information that was used to make inseason management decisions regarding escapement, and prosecution of commercial and subsistence fisheries for fall chum and coho salmon in the Lower Yukon River.

Key words Yukon River, *Oncorhynchus*, Chinook, chum, coho salmon, gillnet test fishery, run assessment, catch per unit effort (CPUE).

INTRODUCTION

The Lower Yukon drift gillnet test fishery project is designed to provide an index of run timing and relative abundance of fall chum salmon *Oncorhynchus keta* and coho salmon *O. kisutch* returning to the Yukon River drainage. Catch per unit of effort (CPUE) is the index used by the test fishery to determine relative abundance for fall chum and coho salmon. Test fishery data are used in conjunction with data provided by other projects, in particular the daily passage estimates based on the sonar operated at Pilot Station, to ensure sufficient numbers of salmon pass through the Lower Yukon River to provide for escapement, treaty commitments, as well as subsistence, commercial and personal uses upriver.

Recently, Yukon River fall chum salmon run sizes have been depressed. In 2000, the Pilot Station sonar passage estimate was approximately 248,000 fall chum salmon; which was 39% lower than the previous 4 year average of approximately 630,600 fish (Appendix A1). During the fall season from 2000 through 2002, no commercial fishery was conducted and subsistence harvest was considerably reduced (Bue et al. *In prep*; Lingnau and Bue 2004). The below-average run of fall chum salmon in 2000, combined with a dramatic increase in the efficiency of some test fishery set gillnet sites, prompted the Alaska Department of Fish and Game (ADF&G) to reevaluate the use of 6.0 in mesh set gillnet gear used in the test fishery. It was uncertain whether the set gillnets used by the test fishery were adequately reflecting the relative abundance of the runs. Additionally, the large catches in the set gillnet test fishery saturated the local subsistence users' needs, making it difficult to distribute the surplus. Selling the surplus was not a feasible option during years of fishery restrictions. Employing drift gillnets to assess the runs allowed ADF&G to better control salmon catches and enabled test fishery personnel to live release fish thereby reducing the incidence of salmon mortality.

With assistance and funding from the U.S. Fish and Wildlife Service, Office of Subsistence Management (OSM), the Lower Yukon drift gillnet test fishery project began operating in 2001 (Newland and Bue 2007). Drift gillnet test fishing stations were established for both the Big Eddy and the Middle Mouth locations. The 6.0 in mesh set gillnets were replaced by 6.0 in mesh drift gillnets to target fall chum and coho salmon. Assessment is possible for fall chum and coho

salmon transiting the North, Middle, and South mouths of the Yukon River Delta, downstream from major subsistence and commercial fisheries. Moreover, the test fishery provides indications as to when and where salmon enter the river. This was particularly important due to the sporadic entry patterns of fall chum salmon.

The project originally operated for both the summer and fall seasons from 2001 through 2003 with support from OSM under contract FIS 01-122. From 2004 through 2006, the project was operated during the fall season only under FIS 04-229. In 2007 and 2008, the project operated with funding from OSM under FIS 07-204, which is scheduled to continue in 2009 as well. In 2008, the Lower Yukon drift gillnet test fishery project completed its eighth year of operation. Additionally, since 2004, the Yukon Delta Fisheries Development Association (YDFDA) has provided technicians to help with test fishery operations.

OBJECTIVES

Project objectives in 2008 were to:

- 1) Estimate CPUE of fall chum and coho salmon on a daily basis as they enter the mouth of the Yukon River.
- 2) Estimate run timing of fall chum and coho salmon as they enter the mouth of the Yukon River.
- 3) Estimate the age, sex and length composition of fall chum and coho salmon for use in brood year assessment and run forecasting.
- 4) Build partnerships and capacity by involving local technicians and communities in project operation and information sharing.

METHODS

STUDY SITE

As in previous years, 2 separate test fishery locations were used near Big Eddy and the Middle Mouth of the Yukon River. The locations were chosen for logistical reasons including their close proximity to the ADF&G Lower Yukon Area field office in the village of Emmonak (N 62° 46' 38.82" - W 164° 32' 46.98"), which is situated approximately 24 river miles (38.6 km) upstream of the South Mouth at the head of Kwiguk Pass, and approximately 99 river miles (159.3 km) downstream from the Pilot Station Sonar project (N 61° 57' 1" - W 162° 51' 37") (Figures 1 and 2).

The Big Eddy test fishery was located in the main channel of Kwikluak Pass (South Mouth) of the Yukon River; upstream and southeast of the village of Emmonak, to assess salmon transiting via the South Mouth of the Yukon River (Figure 1). Site 1 at Big Eddy was located directly upstream of the distributary of Kwiguk Pass from Kwikluak Pass along the right bank (N 62° 44' 21.96" – W 164° 24' 17.4"). The starting point of Site 2 was located across from Site 1 along the left bank, approximately 0.25 mile (0.4 km) downstream and southwest from the starting point of Site 1 (N 62° 44' 23.7" – W 164° 26' 4.26").

The Middle Mouth test fishery was located upstream from Kawanak (Middle Mouth) and Apoon Passes (North Mouth) to assess the passage of salmon transiting both these mouths of the Yukon River (Figure 1). Two drift gillnet sites were utilized in Kwikpak Pass, approximately 7 river miles (11.2 km) upstream of the ADF&G Middle Mouth field camp (N 62° 53' 52.44" – W 164° 5' 49.20"). The Site 1 drift gillnet starting point was along the left bank of the river (N 62° 47' 27.36" – W 164° 03' 27.06"), and Site 2 was located across the river along the right bank (N 62° 48' 12.3" – W 164° 04' 16.8"), approximately 0.75 mile (1.2 km) downstream from the starting point of Site 1.

PROJECT DATE

Project operation dates have varied little over the years. From 2001 to 2008, drift gillnet fishing dates began on 16 July and extended to late August each season. In 2008, operations at both test fishery locations began 16 July and continued through 28 August. Postseason data analysis and report writing were conducted during the winter months, primarily at the ADF&G Anchorage office.

DRIFT GILLNET TEST FISHING

The test fishery used gillnets to specifically target fall chum and coho salmon. Gillnets were constructed of 6.0 in (15.2 cm) mesh, 45 meshes in depth and 50 fathoms (91.4 m) in length with a cork marking at 25 fathoms (45.7 m).

All gillnets were fished by drifting from open aluminum skiffs with one end of the net attached to the skiff and the other attached to a buoy. The drift gillnets were fished once at both sites daily, except during periods of hazardous weather and during commercial periods. Both the Big Eddy and Middle Mouth locations were fished using similar methods.

During normal operations, gillnets were retrieved after 20 minutes of fishing time or after an estimated 30 fish had been captured. In times of high salmon abundance, inclement weather, or excessive debris, the gillnet efficiency was shortened to the 25 fathom midpoint (as indicated by cork-mark) to make it more manageable and/or avoid saturation. Also in times of high salmon abundance, the drift time would be reduced to avoid saturation. The calculation of CPUE compensates for times and length of gillnet that was fished. The species, number caught, number retained, number released, mesh size, station, fishing times, and weather observations were recorded. The fish captured were counted and released unharmed, unless injured by the netting activity. Fish injured by gillnets were retained and sampled for age, sex and length (ASL) information. A maximum sample size of 30 fall chum and coho salmon per site and day were retained for ASL data and all other species of retained fish were distributed locally for subsistence purposes. No fish were sold commercially during the 2008 fall season.

Depth measurements were collected at each of the drift gillnet sites periodically throughout the season to construct bottom profiles. Depth readings were taken with a Hawkeye Handheld Sonar¹ device and recorded for the nearshore and offshore buoy while setting the net and additional readings were recorded for the nearshore and offshore buoys when the net was being retrieved.

¹ Product names used in this report are included for scientific completeness, but do not constitute a product endorsement.

DRIFT SCHEDULE

In 2008, during normal operations, drifts were conducted daily at 0800 hours and 2000 hours regardless of tide stage. Drift schedules were occasionally adjusted or cancelled to avoid test fishing during commercial periods or when inclement weather prohibited drifting effectively and safely.

CPUE CALCULATIONS

The deployment, fishing, and retrieval times of the drift gillnets were recorded for each sampling event. CPUE was calculated using fish per 100 fathom-hours:

$$\text{CPUE} = [((100 \text{ fathom} * 60 \text{ minutes}) * (n)) / (L * T)]$$

where:

n = number of fish caught,

L = length of net in fathoms, and

T = the hours the net fished.

The time the net fished was calculated using:

$$T = [(\text{set time} + \text{retrieval time}) / 2] + \text{soak time}$$

Variation in gillnet fishing time required an independent CPUE calculation for each drift. This value was summed with CPUE calculations from the same day and gear type and then averaged to obtain a CPUE for the day and gear type:

$$\text{Daily CPUE} = ((\sum \text{CPUE}) / n)$$

where:

n = number of sets for the given day and gear type (Molyneaux 1999).

Mean daily CPUE data were summed to produce total seasonal CPUE indices for the period of data collection. Cumulative proportions of seasonal total test fishery CPUE indices were also calculated and used to estimate the midpoint of the fall chum and coho salmon runs.

AGE, SEX AND LENGTH SAMPLING

Age, sex, and length (ASL) data were collected from retained fall chum and coho salmon. A maximum of 30 fall chum and 30 coho salmon were sampled each day at the Big Eddy test fishery and at the Middle Mouth test fishery. All salmon lengths were measured as mideye to fork (MEF) and rounded off to the nearest 5 millimeters. Age was determined by examining scales (Mosher 1968). Scales were collected from the left side of the fish approximately 2 rows above the lateral line in an area crossed by a diagonal from the posterior insertion of the dorsal

fin to the anterior insertion of the anal fin (INPFC 1963). Because of the high rate of scale regeneration among coho salmon, 3 scales were collected from each fish. Only 1 scale per fish was collected from chum salmon. Scales were mounted on gummed cards and impressions were made in cellulose acetate (Clutter and Whitesel 1956). European notation (Koo 1962) was used to record ages; numerals preceding the decimal refer to the number of freshwater annuli and numerals following the decimal refer to the number of marine annuli. Total age from time of egg deposition, or brood year, is the sum of these 2 numbers plus 1 to account for incubation time. The sex of each salmon was verified by visual examination of the gonads through a small ventral incision.

RESULTS

FALL CHUM SALMON

In 2008, a total of 967 fall chum salmon were caught from the combined Big Eddy and Middle Mouth drift gillnet test fishery locations, resulting in a cumulative CPUE of 810.02. The midpoint of the fall chum salmon run at these locations occurred on 13 August (Tables 1 and 2; Figure 3). Females comprised 62.7% of the fall chum salmon sampled ($n=592$) from 16 July through 28 August (Table 3). Fall chum salmon age -0.4 were the dominant age class observed comprising 55.2%, while ages -0.2, -0.3 and -0.5 represented 0.3%, 42.2% and 2.2%, respectively, of the unweighted age sample (Table 3; Horne-Brine et al. *In prep*).

At the Big Eddy drift locations, (Sites 1 and 2 combined), 705 fall chum salmon were captured resulting in a cumulative CPUE of 1,182.20. The midpoint of the fall chum salmon run at Big Eddy was 13 August (Table 1). The mean fishing time at Big Eddy was 19.4 minutes per drift, per day (Appendix A2). Females comprised 63.6% of the fall chum salmon sampled ($n=423$) (Table 3). Fall chum salmon age-0.4 comprised 57.7%, with age-0.2, -0.3 and -0.5 comprising 0.2%, 39.7%, and 2.4% of the unweighted sample, respectively. Mean lengths for males were 560 mm for age-0.2 ($n=1$), 582 mm for age-0.3 ($n=69$), 604 mm for age-0.4 ($n=82$) and 598 mm for age-0.5 ($n=2$). Females had mean lengths of 579 mm for age-0.3 ($n=99$), 596 mm for age-0.4 ($n=162$), and 604 mm for age-0.5 ($n=8$) (Tables 3 and 4; Horne-Brine et al. *In prep*).

At the Middle Mouth drift locations (Stations 1 and 2 combined), 262 fall chum salmon were captured resulting in a cumulative CPUE of 437.83. The midpoint of the run at Middle Mouth was 31 July (Table 1). The mean fishing time was 19.8 minutes per drift, per day (Appendix A2). Females comprised 60.4% of the fall chum salmon sampled ($n=169$) (Table 3). Fall chum salmon age-0.4 predominated; comprising 49.1%, while ages-0.2, -0.3 and -0.5 made up 0.6%, 48.5% and 1.8% of the unweighted age sample, respectively. Mean lengths for male fall chum salmon were 581 mm for age-0.3 ($n=33$) and 608 mm for age-0.4 ($n=34$). Females had mean lengths of 550 mm for age-0.2 ($n=1$), 587 mm for age -0.3 ($n=49$), 605 mm for age -0.4 ($n=49$) and 622 for age-0.5 ($n=3$) (Tables 3 and 4; Horne-Brine et al. *In prep*).

COHO SALMON

Coho salmon were captured during the same drift times as the fall chum salmon, as the 2 species often enter the river synchronously, with greater overlaps in abundance later in the season. A combined total of 268 coho were caught at the combined Big Eddy and Middle Mouth locations resulting in a cumulative CPUE of 226.22. The midpoint of the run occurred on 19 August

(Tables 5 and 6; Figure 4). Females comprised 42.4% of the coho salmon sampled ($n=217$) from 16 July through 28 August (Table 7). Coho salmon age-2.1 predominated; comprising 90.8%, with age-1.1 and -3.1 representing 5.1% and 4.1% of the unweighted age sample, respectively (Table 7; Horne-Brine et al. *In prep*).

There were 170 coho salmon captured at the Big Eddy drift locations, (Stations 1 and 2 combined), with a corresponding cumulative CPUE of 295.87. The midpoint of the run at Big Eddy was 16 August (Table 5). The mean fishing time at Big Eddy was 19.4 minutes per drift, per day (Appendix A2). Females comprised approximately 42.7% of the fish sampled ($n=157$) for ASL data. Age-2.1 comprised 90.4%, age-1.1 represented 5.7%, followed by age-3.1 with 3.8%, of the sample, respectively. Mean lengths for males were 563 mm for age-1.1 ($n=5$), 568 mm for age-2.1 ($n=82$), and 570 mm for age-3.1 ($n=3$). Females had mean lengths of 570 mm for age-1.1 ($n=4$), 571 mm for age-2.1 ($n=60$), and 580 for age-3.1 ($n=3$) (Tables 7 and 8; Horne-Brine et al. *In prep*).

There were 98 coho salmon captured at the Middle Mouth drift locations, (Stations 1 and 2 combined), resulting in a cumulative CPUE of 156.57. The midpoint of the run at Middle Mouth was 22 August (Table 5). The mean fishing time at Middle Mouth was 19.8 minutes per drift, per day (Appendix A2). Females made up 41.7% of the coho salmon sampled ($n=60$) for ASL data. Age-2.1 comprised 91.7% while ages-3.1 and -1.1 represented 5.0%, and 3.3% of the unweighted sample, respectively. Males had mean length measurements of 563 mm for age-2.1 ($n=34$), and 570 mm for age-3.1 ($n=1$). Females had mean length measurements of 545 mm for age-1.1 ($n=2$), 558 mm for age-2.1 ($n=21$), and 575 mm for age-3.1 ($n=2$) (Tables 7 and 8; Horne-Brine et al. *In prep*).

DISCUSSION

The Lower Yukon test fishery indices provide valuable information used to make inseason management decisions for the prosecution of subsistence, personal use and commercial salmon fisheries by ultimately estimating total salmon escapement. However, interpretation of these data is confounded by gillnet selectivity, changes in net site characteristics, and varying fish migration routes through the multi-channel river mouths (Pfisterer 2002). Hydro acoustic abundance estimates provided by the Pilot Station sonar project are used in conjunction with the Mountain Village drift gillnet test fishery, weather observations, subsistence catch reports and commercial catch statistics to corroborate the run timing and relative strength estimates generated by the Lower Yukon fall drift gillnet test fishery project for fall chum and coho salmon (Pfisterer 2002).

FALL CHUM SALMON

The 2008 fall chum salmon passage estimate based on the Pilot Station sonar project was 615,127 fish (Table 9; Carroll and McIntosh *In prep*), which is above the upper end of the drainage wide biological escapement goal (BEG) range of 600,000 fish. Although the 2008 fall chum salmon run was lower than was projected in the preseason forecast, the midseason projection still indicated that the run would support normal subsistence fishing activities and provided commercial fishing opportunities throughout the Yukon River Management Area.

Temporal and spatial variations in the typical run timing entrance patterns between the different mouths of the Lower Yukon River were observed. Typically, fall chum salmon enter the South Mouth (Kwikluak Pass) of the Yukon River Delta 3 days earlier than the Middle Mouth (Kawanak and Kwikpak Passes) and North Mouth (Apoon Pass). However, in 2008, pulses of fall chum salmon entered the South Mouth a week later than average (Appendix A3 and A4), whereas pulses entered the Middle and North Mouths a week earlier than average (Tables 1–2 and Stack²). Based on the 13 August median passage date for the Big Eddy and Middle Mouth sites combined (Table 1), timing of fall chum salmon caught in 2008 was 7 days later than the average but within the historical range (Table 2). Water temperatures in the South, Middle and North Mouths of the lower Yukon River could not explain the shift in run timing entrance patterns as the temperatures did not differ notably from the historical averages (Figures 4, 5, 6). The extent to which weather and water conditions affect run timing of fall chum salmon in the Lower Yukon River is unknown.

On average, pulses of fall chum salmon take approximately 2.8 days to travel between the Lower Yukon test fishery and the Pilot Station sonar project, equating to an average travel speed of 35 miles (56.3 km) per day (B. Borba, Commercial Fisheries Biologist, ADF&G, Fairbanks; personal communication). The relative timing of the pulses at the Lower Yukon test fishery did appear to track with the passage timing at Pilot Station sonar when using a lag time of 3 days (Figures 7 and 8). The midpoint for the fall chum salmon run occurred on 13 August at both the Big Eddy and Middle Mouth drift gillnet locations (Table 2). When corrected for travel time, the midpoint of the fall chum salmon run as estimated by passage at Pilot Station sonar occurred on 8 August (Table 10). Subsequent passage up river was slowed during a high water event (late July through mid August) and fish arrived slightly later than average into the upper river areas.

ADF&G distributed the fall chum salmon retained by the drift gillnet test fisheries to residents in the local communities of Emmonak and Kotlik for subsistence use. Of the 967 fall chum salmon captured in the test fishery, 89 were released unharmed, 432 were given away for subsistence uses, and none were sold or discarded (Appendix A5).

STOCK COMPOSITION

The age, sex and length composition of fall chum salmon did not vary throughout the course of the 2008 run. Age-0.4 individuals made up the dominant age class (Table 3). Females made up a larger proportion of all age classes at both drift gillnet sites (Table 3), and as expected, mean length increased with age for both sexes (Table 4).

Fall chum salmon are also analyzed based on even and odd year cycles weighted by annual test fish CPUE, where the even-numbered years average (including 2008) 5.8%, 57.8%, 35.5% and 0.9% for age-0.2 through age-0.5, respectively. The relatively high percentage (55.2%) of age-0.4 fall chum salmon observed in 2008 was expected based on the production of the 2004 brood year (Bue and Hayes 2008).

COHO SALMON

The 2008 coho salmon passage estimate based on the Pilot Station sonar project was 135,570 fish (Table 9; Carroll and McIntosh *In prep*) this run size is lower than the average for this

² Stack, L. Unpublished. Yukon Area fall season data notebook, 2007. Located at: Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage.

project. There is only 1 escapement goal for coho salmon and it exists in the upper Yukon River drainage on the Delta Clearwater River (DCR). In 2008, the estimated escapement was near 7,500 coho salmon (F. Parker, Sport Fish Division, ADF&G, Upper Tanana Area Management Biologist, Fairbanks) which is slightly above the lower end of the DCR Sustainable Escapement Goal range of 5,200 to 17,000 fish (Bue and Hayes 2008). The 2008 coho salmon run supported normal subsistence fishing activities and provided commercial fishing opportunities within the Yukon River Management Area.

Temporal and spatial patterns for coho salmon are difficult to assess because of the overlap of their run timing with fall chum salmon. In 2008, pulses of coho salmon entered the South Mouth 3 days earlier than average, whereas pulses entered Middle and North Mouths 3 days later compared to the historical average (Appendices 6 and 7). Based on the 19 August median passage date for the Big Eddy and Middle Mouth sites combined (Table 5), timing of coho salmon was later than the average but within the historical range (Table 6). The extent to which weather and water conditions affect run timing of coho salmon in the Lower Yukon River is unknown.

On average, pulses of coho salmon take approximately 3.3 days to travel between the Lower Yukon test fishery and the Pilot Station sonar project, equating to an average travel speed of 30 miles (48.3 km) per day (B. Borba, Commercial Fisheries Biologist, ADF&G, Fairbanks; personal communication). The relative timing of the pulses of coho salmon at the Lower Yukon test fisheries did appear to track with the passage timing at Pilot Station sonar (Figure 10). The midpoint for the coho run occurred on 19 August at both the Big Eddy and Middle Mouth drift gillnet locations (Table 5). The midpoint of the coho salmon run as estimated by passage at Pilot Station sonar occurred on 17 August (Table 10).

ADF&G distributed the coho salmon retained by the drift gillnet test fisheries to residents in the local communities of Emmonak and Kotlik for subsistence use. Of the 268 coho salmon captured in the test fishery, 35 coho salmon were released unharmed, none were sold or discarded, and 97 were distributed to local residents for subsistence uses (Appendix A5).

STOCK COMPOSITION

The age, sex and length composition of coho salmon did not vary throughout the 2008 run. Age-2.1 individuals was the dominant age class (Table 7). Males made up a larger proportion than females in all age classes at both drift gillnet sites (Table 7), and as expected, mean length increased with age for both sexes (Table 8).

The major contributor to the 2008 coho salmon run were the age-4 fish returning from the 2004 parent year (Bue and Hayes 2008). Although there is little comprehensive escapement information on coho salmon within the Yukon River drainage, it is known that coho salmon primarily return as age-4 fish (Horne-Brine and Bue 2008).

RECOMMENDATIONS

The Lower Yukon drift gillnet test fishery project provides useful information concerning the run timing and entry pattern of fall chum and coho salmon into the river. This project is integral to real-time fall salmon run assessment in the lowest portion of the river, 3 days prior to the assessment by the Pilot Station sonar project. The Lower Yukon test fishery project operates

closest to the majority of the commercial fishing sites and therefore provides faster inseason run timing information to gage the potential commercial catch. The fall test fishery is critical to the management of the fall season commercial and subsistence fisheries in the Lower Yukon River, and provides run strength information to subsistence users for maximizing their fishing efficiency.

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REFERENCES CITED

- Bue, F. J., and S. J. Hayes. 2008. 2008 Yukon Area subsistence, personal use, and commercial salmon fisheries outlook and management strategies. Alaska Department of Fish and Game, Regional Information Report 3A08-03, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/RIR.3A.2008.03.pdf>
- Bue, F., T. Vania, K. R. Boeck, B. Borba, A. Brase, W. H. Busher, S. J. Hayes, T. L. Lingnau, and P. Salomone. *In prep.* Annual management report Yukon and Northern Areas 2001. Alaska Department of Fish and Game, Fishery Management Report, Anchorage.
- Carroll, H. C., and B. C. McIntosh. *In prep.* Sonar estimation of salmon passage in the Yukon River near Pilot Station, 2007. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.
- Clutter, R., and L. Whitesel. 1956. Collection and interpretation of sockeye salmon scales. International Pacific Salmon Fisheries Commission Bulletin 9.
- Horne-Brine, M. H., and F. J. Bue. 2008. Fall season cooperative salmon drift gillnet test fishing in the Lower Yukon River, 2007. Alaska Department of Fish and Game, Fishery Data Series No. 08-16, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds08-16.pdf>
- Horne-Brine, M. H., and L. Dubois. *In prep.* Salmon age and sex composition and mean lengths for the Yukon River Area, 2008. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.
- INPFC (International North Pacific Fisheries Commission). 1963. Annual report 1961, Vancouver, British Columbia.
- Koo, T. S. Y. 1962. Age designation in salmon. Pages 37–48 [*In*]: T. S. Y. Koo, editor. Studies of Alaska red salmon. University of Washington Publications in Fisheries, New Series, Volume I, Seattle.
- Lingnau, T., F. J. Bue. 2004. Overview of the Yukon River salmon fishery 2001–2003. A report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 3A04-04, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.3A.2004.04.pdf>
- Molyneaux, D. B. 1999. Data summary for the Kuskokwim River salmon test fishery at Bethel, 1984–2000. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 3A99-33, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidpdfs/RIR.3A.1999.33.pdf>
- Mosher, K. 1968. Photographic atlas of sockeye salmon scales. Fishery Bulletin 67:243–280.
- Newland, E. J., and F. J. Bue. 2007. Fall season cooperative salmon drift gillnet test fishing in the Lower Yukon River, 2006. Alaska Department of Fish and Game, Fishery Data Series No. 07-72, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds07-72.pdf>
- Pfisterer, C. T. 2002. Estimation of Yukon River salmon passage in 2001 using hydroacoustic methodologies. Alaska Department of Fish and Game, Commercial Fisheries Division, AYK Region; 333 Raspberry Rd. Anchorage, AK 99518.

TABLES AND FIGURES

Table 1.—Catch and CPUE data for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2008.

Date	Big Eddy			Middle Mouth			Combined		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
16-Jul	1	1.71	1.71	4	6.00	6.00	5	3.86	3.86
17-Jul ^a	1	3.08	4.79	4	12.31	18.31	5	7.70	11.55
18-Jul	0	0.00	4.79	3	4.50	22.81	3	2.25	13.80
19-Jul	0	0.00	4.79	0	0.00	22.81	0	0.00	13.80
20-Jul	0	0.00	4.79	0	0.00	22.81	0	0.00	13.80
21-Jul	8	12.63	17.42	4	5.93	28.74	12	9.28	23.08
22-Jul ^a	2	6.49	23.91	3	9.08	37.82	5	7.79	30.87
23-Jul	0	0.00	23.91	10	15.98	53.80	10	7.99	38.86
24-Jul	0	0.00	23.91	15	22.17	75.97	15	11.09	49.94
25-Jul ^a	1	3.16	27.07	5	15.00	90.97	6	9.08	59.02
26-Jul	6	9.15	36.22	4	7.82	98.79 ^b	10	8.49	67.51
27-Jul	46	65.68	101.90	8	12.31	111.10	54	39.00	106.50
28-Jul	20	30.45	132.35	31	44.00	155.10	51	37.23	143.73
29-Jul ^a	1	1.62	133.97	2	2.96	158.06	3	2.29	146.02
30-Jul	18	29.59	163.56	25	40.97	199.03	43	35.28	181.30
31-Jul	70	103.46	267.02	22	40.74	239.77	92	72.10	253.40
1-Aug ^a	21	36.99	304.01	18	28.18	267.95	39	32.59	285.98
2-Aug	29	47.70	351.71	15	23.21	291.16	44	35.46	321.44
3-Aug	12	18.91	370.62	14	20.96	312.12	26	19.94	341.37
4-Aug	2	3.33	373.95	3	4.70	316.82	5	4.02	345.39
5-Aug	3	4.29	378.24	1	1.54	318.36	4	2.92	348.30
6-Aug	3	4.56	382.80	0	0.00	318.36	3	2.28	350.58
7-Aug	20	29.01	411.81	1	1.54	319.90	21	15.28	365.86
8-Aug	1	1.62	413.43	1	1.43	321.33	2	1.53	367.38
9-Aug	2	3.08	416.51	0	0.00	321.33 ^c	2	1.54	368.92
10-Aug	1	1.50	418.01	0	0.00	321.33	1	0.75	369.67
11-Aug	0	0.00	418.01	1	1.54	322.87	1	0.77	370.44
12-Aug	12	17.89	435.90	0	0.00	322.87	12	8.95	379.39
13-Aug	228	409.38	845.28	6	9.23	332.10	234	209.31	588.69
14-Aug	30	52.61	897.89	7	11.85	343.95	37	32.23	620.92
15-Aug	7	10.77	908.66	3	4.82	348.77	10	7.80	628.72
16-Aug	10	15.08	923.74	0	0.00	348.77	10	7.54	636.26
17-Aug	0	0.00	923.74	0	0.00	348.77	0	0.00	636.26
18-Aug	5	7.25	930.99	0	0.00	348.77	5	3.63	639.88
19-Aug	10	12.99	943.98	0	0.00	348.77	10	6.50	646.38
20-Aug	0	0.00	943.98	2	3.24	352.01	2	1.62	648.00
21-Aug	0	0.00	943.98	2	4.54	356.55	2	2.27	650.27
22-Aug	27	36.17	980.15	17	24.45	381.00	44	30.31	680.58
23-Aug	1	1.46	981.61	7	10.32	391.32	8	5.89	686.47
24-Aug	9	14.35	995.96	3	4.36	395.68	12	9.36	695.82
25-Aug	30	50.90	1,046.86	2	3.00	398.68	32	26.95	722.77
26-Aug ^a	24	77.35	1,124.21	8	22.52	421.20	32	49.94	772.71
27-Aug	41	53.37	1,177.58	9	13.59	434.79	50	33.48	806.19
28-Aug	3	4.62	1,182.20	2	3.04	437.83	5	3.83	810.02
Total	705		1,182.20	262		437.83	967		810.02

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box.

^a Commercial fishing occurred on this day.

^b Only 3 drifts for the day due to rough water.

^c The drift hit a snag early into the drift.

Table 2.—Historical CPUE data for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2001–2008.

Date	2001			2002			2003			2004		
	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE
16-Jul	21.28	0.02	21.28	0.79	0.00	0.79	25.78	0.02	25.78	0.00	0.00	0.00
17-Jul	149.66	0.13	170.94	11.03	0.01	11.82	20.68	0.04	46.46	0.00	0.00	0.00
18-Jul	139.21	0.23	310.14	0.00	0.01	11.82	1.50	0.04	47.96	0.72	0.00	0.72
19-Jul	27.38	0.25	337.52	3.01	0.02	14.82	1.84	0.04	49.79	48.07	0.06	48.79
20-Jul	1.50	0.26	339.02	0.00	0.02	14.82	1.58	0.04	51.37	15.96	0.09	64.74
21-Jul	3.00	0.26	342.02	0.73	0.02	15.55	24.23	0.06	75.60	19.89	0.11	84.63
22-Jul	6.31	0.26	348.32	0.00	0.02	15.55	41.50	0.09	117.10	5.28	0.12	89.90
23-Jul	50.64	0.30	398.96	0.00	0.02	15.55	15.10	0.11	132.19	1.60	0.12	91.50
24-Jul	64.87	0.35	463.83	0.00	0.02	15.55	9.75	0.11	141.94	0.77	0.12	92.27
25-Jul	31.44	0.37	495.27	54.30	0.09	69.85	2.29	0.12	144.23	0.75	0.12	93.02
26-Jul	4.25	0.38	499.52	3.27	0.09	73.12	6.61	0.12	150.84	5.11	0.13	98.13
27-Jul	11.33	0.39	510.85	9.29	0.10	82.41	84.82	0.19	235.66	1.55	0.13	99.68
28-Jul	4.62	0.39	515.46	35.28	0.14	117.69	25.61	0.21	261.27	0.00	0.13	99.68
29-Jul	0.77	0.39	516.23	32.18	0.18	149.86	17.68	0.22	278.94	0.73	0.13	100.41
30-Jul	7.54	0.39	523.77	1.54	0.19	151.40	1.59	0.22	280.53	0.00	0.13	100.41
31-Jul	95.32	0.47	619.09	0.00	0.19	151.40	0.84	0.23	281.36	6.89	0.14	107.29
1-Aug	43.12	0.50	662.20	15.57	0.20	166.97	4.83	0.23	286.19	146.73	0.34	254.02
2-Aug	114.07	0.59	776.27	1.54	0.21	168.51	0.75	0.23	286.94	74.50	0.43	328.52
3-Aug	101.86	0.66	878.13	5.84	0.21	174.35	203.48	0.39	490.42	18.10	0.46	346.62
4-Aug	22.58	0.68	900.71	0.77	0.21	175.12	179.98	0.54	670.40	12.06	0.47	358.68
5-Aug	7.00	0.68	907.70	0.79	0.22	175.91	15.99	0.55	686.38	2.22	0.48	360.89
6-Aug	100.73	0.76	1,008.43	0.00	0.22	175.91	1.54	0.55	687.92	3.79	0.48	364.68
7-Aug	136.78	0.86	1,145.20	18.10	0.24	194.01	0.00	0.55	687.92	2.27	0.49	366.95
8-Aug	32.57	0.89	1,177.77	16.55	0.26	210.55	0.00	0.55	687.92	59.62	0.56	426.57
9-Aug	19.44	0.90	1,197.21	95.72	0.38	306.27	2.85	0.55	690.77	51.31	0.63	477.88
10-Aug	16.23	0.91	1,213.43	49.88	0.44	356.15	25.26	0.57	716.03	16.64	0.65	494.52
11-Aug	2.91	0.92	1,216.34	19.38	0.46	375.52	3.09	0.58	719.11	1.54	0.66	496.06
12-Aug	26.21	0.94	1,242.55	23.14	0.49	398.66	65.33	0.63	784.44	0.00	0.66	496.06
13-Aug	27.06	0.96	1,269.61	20.94	0.51	419.60	0.00	0.63	784.44	2.52	0.66	498.58
14-Aug	17.26	0.97	1,286.87	7.08	0.52	426.67	55.12	0.67	839.56	24.61	0.69	523.19
15-Aug	11.23	0.98	1,298.10	18.65	0.55	445.32	259.41	0.88	1,098.97	10.44	0.71	533.63
16-Aug	3.76	0.98	1,301.86	284.72	0.89	730.03	48.76	0.92	1,147.73	0.00	0.71	533.63
17-Aug	1.56	0.98	1,303.42	38.44	0.94	768.47	12.61	0.93	1,160.34	2.12	0.71	535.75
18-Aug	2.29	0.98	1,305.71	12.06	0.96	780.53	4.72	0.93	1,165.06	1.47	0.71	537.21
19-Aug	0.00	0.98	1,305.71	6.68	0.96	787.20	0.00	0.93	1,165.06	0.00	0.71	537.21
20-Aug	2.33	0.99	1,308.04	2.85	0.97	790.05	2.33	0.93	1,167.39	119.04	0.87	656.25
21-Aug	13.83	1.00	1,321.87	5.66	0.97	795.71	3.92	0.94	1,171.31	20.35	0.90	676.60
22-Aug	3.75	1.00	1,325.62	13.04	0.99	808.75	21.23	0.95	1,192.53	0.77	0.90	677.37
23-Aug	0.00	1.00	1,325.62	3.95	1.00	812.70	34.13	0.98	1,226.66	0.00	0.90	677.37
24-Aug	0.77	1.00	1,326.39	0.00	1.00	812.70	17.16	1.00	1,243.82	5.81	0.90	683.18
25-Aug	0.00	1.00	1,326.39	0.00	1.00	812.70	3.00	1.00	1,246.82	10.32	0.92	693.50
26-Aug	0.00	1.00	1,326.39	0.00	1.00	812.70	2.33	1.00	1,249.15	17.81	0.94	711.31
27-Aug	0.00	1.00	1,326.39	0.79	1.00	813.49	0.00	1.00	1,249.15	44.26	1.00	755.56
28-Aug	0.00	1.00	1,326.39	3.08	1.00	816.57	0.00	1.00	1,249.15	—	—	755.56
29-Aug	—	—	1,326.39	—	—	816.57	—	—	1,249.15	—	—	755.56
Totals	1,326.39			816.57			1,249.15			755.56		

-continued-

Table 2.–Page 2 of 2.

	2005			2006			2007			2008			2001–2007 Average		
	Daily	%.	Cum.	Daily	%.	Cum.	Daily	%.	Cum.	Daily	%.	Cum.	Daily	%.	Cum.
Date	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE	CPUE
16-Jul	11.22	0.00	11.22	69.62	0.06	69.62	4.35	0.00	4.35	3.86	0.00	3.86	19.01	0.02	19.01
17-Jul	14.11	0.01	25.33	9.65	0.07	79.27	8.73	0.01	13.08	7.70	0.01	11.55	30.55	0.04	49.55
18-Jul	231.72	0.11	257.04	3.81	0.07	83.08	2.27	0.02	15.35	2.25	0.02	13.80	54.17	0.07	103.73
19-Jul	99.31	0.15	356.35	0.86	0.07	83.93	0.79	0.02	16.14	0.00	0.02	13.80	25.89	0.09	129.62
20-Jul	22.54	0.16	378.89	0.00	0.07	83.93	3.32	0.02	19.45	0.00	0.02	13.80	6.41	0.09	136.03
21-Jul	2.24	0.16	381.12	11.79	0.08	95.72	3.02	0.02	22.47	9.28	0.03	23.08	9.27	0.10	145.30
22-Jul	0.86	0.16	381.98	2.25	0.09	97.97	0.00	0.02	22.47	7.79	0.04	30.87	8.03	0.11	153.33
23-Jul	0.72	0.16	382.69	0.75	0.09	98.72	0.00	0.02	22.47	7.99	0.05	38.86	9.83	0.12	163.15
24-Jul	1.40	0.16	384.09	2.33	0.09	101.05	0.73	0.02	23.20	11.09	0.06	49.94	11.41	0.13	174.56
25-Jul	0.77	0.16	384.86	7.24	0.09	108.29	0.00	0.02	23.20	9.08	0.07	59.02	13.83	0.14	188.39
26-Jul	3.79	0.17	388.65	0.00	0.09	108.29	0.73	0.02	23.93	8.49	0.08	67.51	3.39	0.14	191.78
27-Jul	2.22	0.17	390.86	77.34	0.16	185.63	0.77	0.02	24.70	39.00	0.13	106.50	26.76	0.17	218.54
28-Jul	5.39	0.17	396.25	89.31	0.24	274.94	3.73	0.03	28.44	37.23	0.18	143.73	23.42	0.19	241.96
29-Jul	123.99	0.22	520.24	81.91	0.31	356.84	0.00	0.03	28.44	2.29	0.18	146.02	36.75	0.21	278.71
30-Jul	42.22	0.24	562.46	87.06	0.39	443.90	0.77	0.03	29.20	35.28	0.22	181.30	20.10	0.23	298.81
31-Jul	473.54	0.44	1,036.00	33.20	0.41	477.10	0.00	0.03	29.20	72.10	0.31	253.40	87.11	0.27	385.92
1-Aug	34.74	0.46	1,070.73	47.63	0.46	524.72	0.00	0.03	29.20	32.59	0.35	285.98	41.80	0.32	427.72
2-Aug	0.75	0.46	1,071.48	18.48	0.47	543.20	11.59	0.04	40.80	35.46	0.40	321.44	31.67	0.35	459.39
3-Aug	2.95	0.46	1,074.43	2.39	0.47	545.58	13.14	0.05	53.94	19.94	0.42	341.37	49.68	0.39	509.06
4-Aug	0.75	0.46	1,075.18	2.74	0.48	548.32	0.77	0.05	54.71	4.02	0.43	345.39	31.38	0.41	540.44
5-Aug	124.68	0.51	1,199.85	11.99	0.49	560.31	0.73	0.06	55.44	2.92	0.43	348.30	23.34	0.43	563.78
6-Aug	256.76	0.62	1,456.61	28.36	0.51	588.66	110.89	0.17	166.33	2.28	0.43	350.58	71.72	0.47	635.50
7-Aug	105.32	0.67	1,561.92	12.78	0.52	601.44	137.18	0.30	303.51	15.28	0.45	365.86	58.92	0.52	694.42
8-Aug	52.04	0.69	1,613.96	9.07	0.53	610.51	64.98	0.37	368.49	1.53	0.45	367.38	33.55	0.55	727.97
9-Aug	19.47	0.70	1,633.43	3.79	0.53	614.30	3.02	0.37	371.51	1.54	0.46	368.92	27.94	0.58	755.91
10-Aug	12.46	0.70	1,645.89	0.00	0.53	614.30	2.93	0.38	374.44	0.75	0.46	369.67	17.63	0.60	773.53
11-Aug	20.90	0.71	1,666.79	1.50	0.54	615.80	9.27	0.39	383.71	0.77	0.46	370.44	8.37	0.61	781.90
12-Aug	7.97	0.72	1,674.76	185.14	0.70	800.93	92.70	0.48	476.41	8.95	0.47	379.39	57.21	0.66	839.11
13-Aug	3.03	0.72	1,677.78	31.52	0.72	832.45	149.66	0.63	626.07	209.31	0.73	588.69	33.53	0.69	872.65
14-Aug	30.03	0.73	1,707.81	7.90	0.73	840.34	32.54	0.66	658.61	32.23	0.77	620.92	24.93	0.71	897.58
15-Aug	17.94	0.74	1,725.75	36.98	0.76	877.32	7.11	0.67	665.72	7.80	0.78	628.72	51.68	0.75	949.26
16-Aug	6.63	0.74	1,732.37	11.03	0.77	888.35	8.49	0.68	674.22	7.54	0.79	636.26	51.91	0.81	1,001.17
17-Aug	13.04	0.75	1,745.41	32.06	0.80	920.40	7.60	0.68	681.81	0.00	0.79	636.26	15.34	0.83	1,016.51
18-Aug	71.54	0.78	1,816.94	15.14	0.81	935.54	5.87	0.69	687.69	3.63	0.79	639.88	16.15	0.84	1,032.67
19-Aug	69.99	0.81	1,886.93	92.10	0.89	1,027.64	8.05	0.70	695.74	6.50	0.80	646.38	25.26	0.86	1,057.92
20-Aug	50.03	0.83	1,936.95	34.02	0.92	1,061.65	1.58	0.70	697.32	1.62	0.80	648.00	30.31	0.89	1,088.23
21-Aug	43.27	0.85	1,980.22	7.77	0.93	1,069.42	0.86	0.70	698.18	2.27	0.80	650.27	13.66	0.90	1,101.90
22-Aug	64.93	0.88	2,045.15	0.84	0.93	1,070.25	0.73	0.70	698.91	30.31	0.84	680.58	15.04	0.91	1,116.94
23-Aug	128.61	0.93	2,173.75	20.95	0.95	1,091.20	10.19	0.71	709.10	5.89	0.85	686.47	28.26	0.92	1,145.20
24-Aug	58.17	0.95	2,231.92	15.48	0.96	1,106.68	93.02	0.81	802.12	9.36	0.86	695.82	27.20	0.95	1,172.40
25-Aug	30.22	0.97	2,262.14	2.50	0.96	1,109.18	96.78	0.90	898.90	26.95	0.89	722.77	20.40	0.96	1,192.80
26-Aug	18.25	0.98	2,280.39	5.00	0.97	1,114.18	28.48	0.93	927.38	49.94	0.95	772.71	10.27	0.97	1,203.07
27-Aug	11.45	0.98	2,291.84	27.47	0.99	1,141.64	4.62	0.94	932.00	33.48	1.00	806.19	12.65	0.99	1,215.72
28-Aug	11.78	0.99	2,303.62	8.61	1.00	1,150.25	64.27	1.00	996.27	3.83	1.00	810.02	14.62	1.00	1,228.26
29-Aug	33.59	1.00	2,337.21	—	—	1,150.25	—	—	996.27	—	—	810.02	33.59	1.00	1,233.05
Totals	2,337.21			1,150.25			996.27			810.02			1,233.05		

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date range.

Table 3.—Summary of fall chum salmon age and sex data for the Lower Yukon drift gillnet test fishery, 2008.

		Brood Year and Age Class										
		2005		2004		2003		2002				
		Age -0.2		Age -0.3		Age -0.4		Age -0.5		Total		
Big Eddy		No.	%	No.	%	No.	%	No.	%	No.	%	
Sample Size	423	Males	1	0.2	69	16.3	82	19.4	2	0.5	154	36.4
		Females	0	0.0	99	23.4	162	38.3	8	1.9	269	63.6
		Total	1	0.2	168	39.7	244	57.7	10	2.4	423	100.0
Middle Mouth		No.	%	No.	%	No.	%	No.	%	No.	%	
Sample Size	169	Males	0	0.0	33	19.5	34	20.1	0	0.0	67	39.6
		Females	1	0.6	49	29.0	49	29.0	3	1.8	102	60.4
		Total	1	0.6	82	48.5	83	49.1	3	1.8	169	100.0
Season Total		No.	%	No.	%	No.	%	No.	%	No.	%	
Sample Size	592	Males	1	0.2	102	17.2	116	19.6	2	0.3	221	37.3
		Females	1	0.2	148	25.0	211	35.6	11	1.9	371	62.7
		Total	2	0.3	250	42.2	327	55.2	13	2.2	592	100.0

Table 4.—Summary of fall chum salmon length (mm) by age and sex for the Lower Yukon drift gillnet test fishery, 2008.

		Brood Year and Age Class									
		2005		2004		2003		2002			
		Age -0.2		Age -0.3		Age -0.4		Age -0.5			
Big Eddy	Mean Length	Males	560		582		604		598		
	Std. Error		-		3		3		33		
	Mean Length	Females	-		579		596		604		
	Std. Error		-		2		2		10		
Middle Mouth	Mean Length	Males	-		581		608		-		
	Std. Error		-		5		5		-		
	Mean Length	Females	550		587		605		622		
	Std. Error		-		4		4		16		
Season Total	Mean Length	Males	560		582		605		598		
	Std. Error		-		3		3		33		
	Mean Length	Females	550		582		598		609		
	Std. Error		-		2		2		8		

Table 5.—Catch and CPUE data for coho salmon in the Lower Yukon drift gillnet test fishery, 2008.

Date	Big Eddy			Middle Mouth			Combined		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
16-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
17-Jul ^a	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
18-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
19-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
20-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
21-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
22-Jul ^a	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
23-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
24-Jul	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
25-Jul ^a	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
26-Jul	1	1.43	1.43	0	0.00	0.00 ^b	1	0.72	0.72
27-Jul	0	0.00	1.43	0	0.00	0.00	0	0.00	0.72
28-Jul	2	3.00	4.43	2	2.93	2.93	4	2.97	3.68
29-Jul ^a	0	0.00	4.43	1	1.43	4.36	1	0.72	4.40
30-Jul	2	3.39	7.82	1	1.58	5.94	3	2.49	6.88
31-Jul	5	7.67	15.49	0	0.00	5.94	5	3.84	10.72
1-Aug ^a	1	2.22	17.71	1	1.58	7.52	2	1.90	12.62
2-Aug	3	4.86	22.57	0	0.00	7.52	3	2.43	15.05
3-Aug	1	1.58	24.15	2	3.00	10.52	3	2.29	17.34
4-Aug	2	3.21	27.36	0	0.00	10.52	2	1.61	18.94
5-Aug	0	0.00	27.36	1	1.46	11.98	1	0.73	19.67
6-Aug	6	9.22	36.58	0	0.00	11.98	6	4.61	24.28
7-Aug	11	16.27	52.85	0	0.00	11.98	11	8.14	32.42
8-Aug	0	0.00	52.85	3	4.51	16.49	3	2.26	34.67
9-Aug	1	1.54	54.39	2	2.86	19.35 ^c	3	2.20	36.87
10-Aug	0	0.00	54.39	1	1.50	20.85	1	0.75	37.62
11-Aug	0	0.00	54.39	0	0.00	20.85	0	0.00	37.62
12-Aug	8	11.85	66.24	1	1.62	22.47	9	6.74	44.36
13-Aug	20	37.69	103.93	2	3.08	25.55	22	20.39	64.74
14-Aug	18	31.39	135.32	7	11.29	36.84	25	21.34	86.08
15-Aug	5	7.69	143.01	2	3.11	39.95	7	5.40	91.48
16-Aug	6	9.08	152.09	0	0.00	39.95	6	4.54	96.02
17-Aug	0	0.00	152.09	0	0.00	39.95	0	0.00	96.02
18-Aug	3	4.29	156.38	3	7.25	47.20	6	5.77	101.79
19-Aug	17	21.70	178.08	0	0.00	47.20	17	10.85	112.64
20-Aug	2	3.04	181.12	5	7.78	54.98	7	5.41	118.05
21-Aug	1	1.50	182.62	9	16.77	71.75	10	9.14	127.19
22-Aug	12	16.37	198.99	17	24.98	96.73	29	20.68	147.86
23-Aug	0	0.00	198.99	8	11.93	108.66	8	5.97	153.83
24-Aug	6	9.49	208.48	8	11.82	120.48	14	10.66	164.48
25-Aug	23	52.64	261.12	6	9.08	129.56	29	30.86	195.34
26-Aug ^a	3	18.97	280.09	2	5.58	135.14	5	12.28	207.62
27-Aug	10	14.24	294.33	5	7.66	142.80	15	10.95	218.57
28-Aug	1	1.54	295.87	9	13.77	156.57	10	7.66	226.22
Total	170	295.87	98		156.57	268		226.22	

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box.

^a Commercial fishing occurred on this day.

^b Only 3 drifts for the day due to rough water.

^c The drift hit a snag early into the drift.

Table 6.—Historical CPUE data for coho salmon in the Lower Yukon drift gillnet test fishery, 2001–2008.

Date	2001			2002			2003			2004		
	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE	Daily CPUE	%. CPUE	Cum. CPUE
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.79	0.00	0.00	0.00
23-Jul	1.50	0.00	1.50	0.00	0.00	0.00	0.84	0.00	1.63	0.00	0.00	0.00
24-Jul	0.88	0.01	2.38	0.00	0.00	0.00	0.00	0.00	1.63	0.00	0.00	0.00
25-Jul	0.00	0.01	2.38	0.00	0.00	0.00	0.00	0.00	1.63	0.00	0.00	0.00
26-Jul	0.00	0.01	2.38	0.00	0.00	0.00	0.00	0.00	1.63	0.72	0.00	0.72
27-Jul	0.75	0.01	3.13	0.00	0.00	0.00	11.95	0.02	13.57	0.00	0.00	0.72
28-Jul	0.00	0.01	3.13	0.00	0.00	0.00	3.08	0.02	16.65	0.00	0.00	0.72
29-Jul	0.00	0.01	3.13	0.00	0.00	0.00	5.27	0.03	21.91	0.00	0.00	0.72
30-Jul	0.75	0.01	3.88	0.00	0.00	0.00	0.00	0.03	21.91	0.00	0.00	0.72
31-Jul	3.05	0.02	6.93	0.00	0.00	0.00	0.79	0.03	22.70	0.00	0.00	0.72
1-Aug	0.00	0.02	6.93	2.04	0.01	2.04	2.39	0.04	25.09	1.35	0.01	2.06
2-Aug	4.86	0.03	11.79	0.00	0.01	2.04	0.00	0.04	25.09	8.00	0.03	10.06
3-Aug	13.29	0.06	25.07	2.20	0.01	4.24	55.61	0.11	80.70	6.67	0.06	16.73
4-Aug	9.85	0.09	34.92	0.00	0.01	4.24	67.84	0.21	148.54	0.00	0.06	16.73
5-Aug	5.70	0.10	40.62	0.72	0.01	4.95	10.94	0.22	159.47	0.77	0.06	17.50
6-Aug	18.03	0.15	58.65	0.00	0.01	4.95	0.00	0.22	159.47	0.00	0.06	17.50
7-Aug	50.38	0.28	109.02	5.53	0.03	10.48	0.77	0.23	160.24	0.00	0.06	17.50
8-Aug	21.82	0.33	130.84	5.18	0.04	15.66	0.00	0.23	160.24	4.68	0.07	22.17
9-Aug	14.08	0.37	144.92	16.70	0.08	32.35	5.15	0.23	165.39	19.97	0.14	42.14
10-Aug	27.75	0.44	172.67	9.56	0.11	41.91	12.64	0.25	178.03	14.38	0.19	56.52
11-Aug	15.41	0.48	188.07	26.15	0.18	68.06	7.62	0.26	185.65	5.39	0.21	61.90
12-Aug	28.61	0.55	216.68	15.58	0.22	83.63	33.53	0.31	219.17	1.39	0.21	63.29
13-Aug	31.52	0.63	248.20	21.92	0.28	105.55	3.08	0.31	222.25	4.02	0.23	67.31
14-Aug	28.23	0.70	276.42	5.34	0.29	110.89	53.68	0.39	275.93	25.69	0.31	93.00
15-Aug	34.28	0.79	310.70	20.02	0.34	130.90	261.64	0.76	537.56	5.26	0.33	98.25
16-Aug	13.58	0.82	324.28	102.86	0.61	233.76	41.42	0.81	578.98	2.40	0.34	100.65
17-Aug	11.14	0.85	335.41	45.98	0.73	279.74	10.91	0.83	589.89	6.61	0.36	107.25
18-Aug	9.23	0.87	344.64	34.05	0.82	313.79	13.87	0.85	603.76	9.01	0.39	116.26
19-Aug	15.60	0.91	360.24	22.75	0.88	336.54	2.37	0.85	606.13	2.36	0.40	118.62
20-Aug	2.35	0.92	362.59	10.59	0.91	347.12	2.37	0.86	608.50	18.72	0.46	137.34
21-Aug	11.27	0.95	373.86	3.81	0.92	350.93	10.14	0.87	618.63	58.75	0.66	196.09
22-Aug	14.50	0.98	388.36	17.87	0.97	368.80	44.84	0.93	663.47	1.52	0.66	197.61
23-Aug	1.54	0.99	389.90	3.04	0.97	371.84	24.76	0.97	688.23	1.48	0.67	199.09
24-Aug	2.29	0.99	392.19	3.12	0.98	374.96	13.18	0.99	701.41	1.50	0.67	200.59
25-Aug	0.00	0.99	392.19	0.77	0.98	375.73	3.79	0.99	705.20	11.75	0.71	212.33
26-Aug	1.47	1.00	393.65	1.03	0.99	376.76	3.17	1.00	708.36	11.29	0.75	223.62
27-Aug	0.00	1.00	393.65	0.79	0.99	377.55	0.00	1.00	708.36	73.83	1.00	297.45
28-Aug	0.81	1.00	394.46	4.62	1.00	382.16	3.16	1.00	711.52	—	—	297.45
29-Aug	—	—	394.46	—	—	382.16	—	—	711.52	—	—	297.45
Totals	394.46			382.16			711.52			297.45		

-continued-

Table 6.–Page 2 of 2.

Date	2005			2006			2007			2008			2001-2007 Average		
	Daily CPUE	%.	Cum.	Daily CPUE	%.	Cum.									
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.67	0.00	0.00	0.00	0.10	0.00	0.10
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.10
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.10
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.10
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.10
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.11	0.00	0.21
23-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.33	0.00	0.54
24-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.13	0.00	0.67
25-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.67
26-Jul	0.00	0.00	0.00	0.84	0.00	0.84	0.00	0.00	0.67	0.72	0.00	0.72	0.22	0.00	0.89
27-Jul	0.00	0.00	0.00	2.65	0.02	3.49	0.00	0.00	0.67	0.00	0.00	0.72	2.19	0.01	3.08
28-Jul	0.00	0.00	0.00	1.50	0.03	4.99	0.75	0.00	1.42	2.97	0.02	3.68	0.76	0.01	3.84
29-Jul	3.64	0.01	3.64	6.17	0.06	11.16	0.00	0.00	1.42	0.72	0.02	4.40	2.15	0.02	5.99
30-Jul	3.13	0.02	6.76	8.30	0.10	19.46	1.46	0.01	2.88	2.49	0.03	6.88	1.95	0.03	7.94
31-Jul	6.68	0.04	13.44	3.98	0.12	23.43	0.77	0.01	3.65	3.84	0.05	10.72	2.18	0.03	10.12
1-Aug	3.11	0.06	16.55	3.69	0.14	27.12	0.75	0.01	4.40	1.90	0.06	12.62	1.90	0.04	12.03
2-Aug	0.73	0.06	17.28	0.75	0.15	27.87	11.02	0.04	15.42	2.43	0.07	15.05	3.62	0.05	15.65
3-Aug	1.45	0.06	18.73	1.03	0.15	28.89	5.95	0.05	21.37	2.29	0.08	17.34	12.31	0.07	27.96
4-Aug	0.00	0.06	18.73	0.00	0.15	28.89	1.50	0.06	22.87	1.61	0.08	18.94	11.31	0.09	39.27
5-Aug	2.65	0.07	21.38	3.18	0.17	32.07	4.45	0.07	27.31	0.73	0.09	19.67	4.06	0.10	43.33
6-Aug	19.87	0.14	41.25	0.00	0.17	32.07	24.93	0.13	52.24	4.61	0.11	24.28	8.98	0.13	52.30
7-Aug	36.04	0.26	77.29	1.27	0.18	33.34	36.22	0.22	88.45	8.14	0.14	32.42	18.60	0.18	70.90
8-Aug	16.83	0.31	94.11	1.11	0.18	34.45	27.98	0.29	116.43	2.26	0.15	34.67	11.08	0.21	81.99
9-Aug	5.63	0.33	99.74	0.67	0.19	35.12	1.52	0.29	117.95	2.20	0.16	36.87	9.10	0.23	91.08
10-Aug	4.41	0.35	104.15	1.58	0.19	36.70	0.70	0.29	118.65	0.75	0.17	37.62	10.14	0.26	101.23
11-Aug	4.18	0.36	108.33	1.61	0.20	38.30	9.57	0.32	128.22	0.00	0.17	37.62	9.99	0.29	111.22
12-Aug	7.96	0.39	116.28	10.21	0.26	48.51	43.47	0.42	171.69	6.74	0.20	44.36	20.10	0.34	131.32
13-Aug	3.85	0.40	120.13	3.80	0.28	52.31	108.05	0.69	279.74	20.39	0.29	64.74	25.18	0.40	156.50
14-Aug	10.42	0.43	130.55	4.01	0.30	56.32	19.65	0.74	299.39	21.34	0.38	86.08	21.00	0.45	177.50
15-Aug	5.49	0.45	136.03	14.16	0.37	70.47	5.52	0.75	304.91	5.40	0.40	91.48	49.48	0.54	226.97
16-Aug	2.99	0.46	139.02	3.31	0.39	73.78	6.20	0.77	311.11	4.54	0.42	96.02	24.68	0.60	251.65
17-Aug	8.57	0.49	147.59	17.65	0.48	91.43	6.99	0.79	318.09	0.00	0.42	96.02	15.41	0.65	267.06
18-Aug	10.89	0.53	158.48	5.97	0.52	97.40	2.98	0.79	321.07	5.77	0.45	101.79	12.29	0.68	279.34
19-Aug	15.29	0.58	173.77	35.84	0.71	133.24	4.41	0.80	325.48	10.85	0.50	112.64	14.09	0.73	293.43
20-Aug	8.79	0.61	182.56	20.74	0.82	153.98	8.66	0.83	334.14	5.41	0.52	118.05	10.32	0.77	303.74
21-Aug	8.14	0.63	190.69	3.92	0.84	157.89	3.43	0.83	337.57	9.14	0.56	127.19	14.21	0.81	317.95
22-Aug	12.00	0.67	202.69	0.00	0.84	157.89	0.73	0.84	338.30	20.68	0.65	147.86	13.07	0.84	331.02
23-Aug	24.81	0.76	227.50	2.79	0.85	160.68	2.06	0.84	340.36	5.97	0.68	153.83	8.64	0.86	339.65
24-Aug	27.81	0.85	255.31	6.03	0.88	166.71	5.90	0.86	346.25	10.66	0.73	164.48	8.55	0.89	348.20
25-Aug	8.05	0.88	263.36	1.69	0.89	168.40	18.37	0.90	364.62	30.86	0.86	195.34	6.35	0.91	354.55
26-Aug	13.02	0.92	276.38	11.60	0.95	179.99	16.76	0.94	381.38	12.28	0.92	207.62	8.33	0.94	362.87
27-Aug	4.28	0.93	280.66	0.79	0.96	180.78	2.35	0.95	383.73	10.95	0.97	218.57	11.72	0.97	374.60
28-Aug	2.21	0.94	282.87	7.88	1.00	188.66	20.78	1.00	404.52	7.66	1.00	226.22	6.58	0.99	380.23
29-Aug	17.87	1.00	300.73	—	—	188.66	—	—	404.52	—	—	226.22	17.87	1.00	379.16
Totals	300.73			188.66			404.52			226.22			379.16		

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date range.

Table 7.—Summary of coho salmon age and sex data for the Lower Yukon drift gillnet test fishery, 2008.

		Brood Year and Age Class								
		2005		2004		2003		Total		
		Age -1.1		Age -2.1		Age -3.1				
Big Eddy Sample Size	157	Males	No.	%	No.	%	No.	%	No.	%
			5	3.2	82	52.2	3	1.9	90	57.3
		Females	4	2.5	60	38.2	3	1.9	67	42.7
		Total	9	5.7	142	90.4	6	3.8	157	100.0
Middle Mouth Sample Size	60	Males	No.	%	No.	%	No.	%	No.	%
			0	0.0	34	56.7	1	1.7	35	58.3
		Females	2	3.3	21	35.0	2	3.3	25	41.7
		Total	2	3.3	55	91.7	3	5.0	60	100.0
Season Total Sample Size	217	Males	No.	%	No.	%	No.	%	No.	%
			5	2.3	116	53.5	4	1.8	125	57.6
		Females	6	2.8	81	37.3	5	2.3	92	42.4
		Total	11	5.1	197	90.8	9	4.1	217	100.0

Table 8.—Summary of coho salmon length (mm) by age and sex for the Lower Yukon drift gillnet test fishery, 2008.

		Brood Year and Age Class				
		2005		2004		2003
		Age -1.1		Age -2.1		Age -3.1
Big Eddy	Mean Length	Males	563		568	570
	Std. Error		7		3	10
	Mean Length	Females	570		571	580
	Std. Error		5		3	5
Middle Mouth	Mean Length	Males	-		563	570
	Std. Error		-		5	-
	Mean Length	Females	545		558	575
	Std. Error		25		6	5
Season Total	Mean Length	Males	563		567	570
	Std. Error		7		2	7
	Mean Length	Females	562		568	578
	Std. Error		9		3	3

Table 9.—Preliminary Pilot Station fall season sonar passage estimates attributed to fall chum and coho salmon, 2008.

Date	Fall Chum		Coho	
	Daily	Cum.	Daily	Cum.
19-Jul	6,849	6,849	26	26
20-Jul ^a	6,968	13,817	13	39
21-Jul	8,270	22,087	0	39
22-Jul	4,249	26,336	0	39
23-Jul ^a	7,199	33,535	0	39
24-Jul	14,408	47,943	0	39
25-Jul	13,710	61,653	0	39
26-Jul	7,854	69,507	0	39
27-Jul ^a	2,364	71,871	123	162
28-Jul	5,877	77,748	28	190
29-Jul	12,134	89,882	0	190
30-Jul ^a	21,369	111,251	312	502
31-Jul	13,307	124,558	277	779
1-Aug	37,185	161,743	554	1,333
2-Aug	26,671	188,414	225	1,558
3-Aug	20,375	208,789	1,374	2,932
4-Aug	22,209	230,998	1,413	4,345
5-Aug	14,135	245,133	2,007	6,352
6-Aug	14,395	259,528	1,014	7,366
7-Aug	7,128	266,656	1,740	9,106
8-Aug	12,223	278,879	2,027	11,133
9-Aug	5,424	284,303	1,170	12,303
10-Aug	8,680	292,983	1,861	14,164
11-Aug	8,839	301,822	3,477	17,641
12-Aug	3,540	305,362	5,303	22,944
13-Aug	2,339	307,701	4,779	27,723
14-Aug	3,335	311,036	5,245	32,968
15-Aug	27,852	338,888	2,561	35,529
16-Aug	50,463	389,351	5,133	40,662
17-Aug	23,045	412,396	5,100	45,762
18-Aug	7,771	420,167	6,649	52,411
19-Aug	6,983	427,150	7,073	59,484
20-Aug	10,149	437,299	5,043	64,527
21-Aug	25,347	462,646	5,047	69,574
22-Aug	8,348	470,994	6,024	75,598
23-Aug	4,717	475,711	8,803	84,401
24-Aug	5,480	481,191	1,695	86,096
25-Aug ^a	8,479	489,670	5,739	91,835
26-Aug	7,334	497,004	5,067	96,902
27-Aug	10,655	507,659	5,419	102,321
28-Aug ^a	22,298	529,957	2,479	104,800
29-Aug	42,162	572,119	4,448	109,248
30-Aug	24,792	596,911	5,073	114,321
31-Aug	5,532	602,443	5,158	119,479
1-Sep	2,896	605,339	3,169	122,648
2-Sep	2,926	608,265	2,607	125,255
3-Sep	787	609,052	2,923	128,178
4-Sep	597	609,649	2,238	130,416
5-Sep	2,277	611,926	2,434	132,850
6-Sep	278	612,204	443	133,293
7-Sep	2,923	615,127	2,277	135,570
Total	615,127		135,570	

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box.

^a Commercial fishing in District Y-2 occurred on this day.

Table 10.—Pilot Station fall season sonar passage estimation attributed to fall chum and coho salmon, adjusted for passage at the Lower Yukon test fishery, 2008.

Date	Fall Chum		Coho	
	Daily	Cum.	Daily	Cum.
16-Jul	6,849	6,849	26	26
17-Jul ^a	6,968	13,817	13	39
18-Jul	8,270	22,087	0	39
19-Jul	4,249	26,336	0	39
20-Jul	7,199	33,535	0	39
21-Jul	14,408	47,943	0	39
22-Jul ^a	13,710	61,653	0	39
23-Jul	7,854	69,507	0	39
24-Jul	2,364	71,871	123	162
25-Jul ^a	5,877	77,748	28	190
26-Jul	12,134	89,882	0	190
27-Jul	21,369	111,251	312	502
28-Jul	13,307	124,558	277	779
29-Jul ^a	37,185	161,743	554	1,333
30-Jul	26,671	188,414	225	1,558
31-Jul	20,375	208,789	1,374	2,932
1-Aug ^a	22,209	230,998	1,413	4,345
2-Aug	14,135	245,133	2,007	6,352
3-Aug	14,395	259,528	1,014	7,366
4-Aug	7,128	266,656	1,740	9,106
5-Aug	12,223	278,879	2,027	11,133
6-Aug	5,424	284,303	1,170	12,303
7-Aug	8,680	292,983	1,861	14,164
8-Aug	8,839	301,822	3,477	17,641
9-Aug	3,540	305,362	5,303	22,944
10-Aug	2,339	307,701	4,779	27,723
11-Aug	3,335	311,036	5,245	32,968
12-Aug	27,852	338,888	2,561	35,529
13-Aug	50,463	389,351	5,133	40,662
14-Aug	23,045	412,396	5,100	45,762
15-Aug	7,771	420,167	6,649	52,411
16-Aug	6,983	427,150	7,073	59,484
17-Aug	10,149	437,299	5,043	64,527
18-Aug	25,347	462,646	5,047	69,574
19-Aug	8,348	470,994	6,024	75,598
20-Aug	4,717	475,711	8,803	84,401
21-Aug	5,480	481,191	1,695	86,096
22-Aug	8,479	489,670	5,739	91,835
23-Aug	7,334	497,004	5,067	96,902
24-Aug	10,655	507,659	5,419	102,321
25-Aug	22,298	529,957	2,479	104,800
26-Aug ^a	42,162	572,119	4,448	109,248
27-Aug	24,792	596,911	5,073	114,321
28-Aug	5,532	602,443	5,158	119,479
Total	602,443		119,479	

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box.

^a Commercial fishing in District Y-1 occurred on this day.

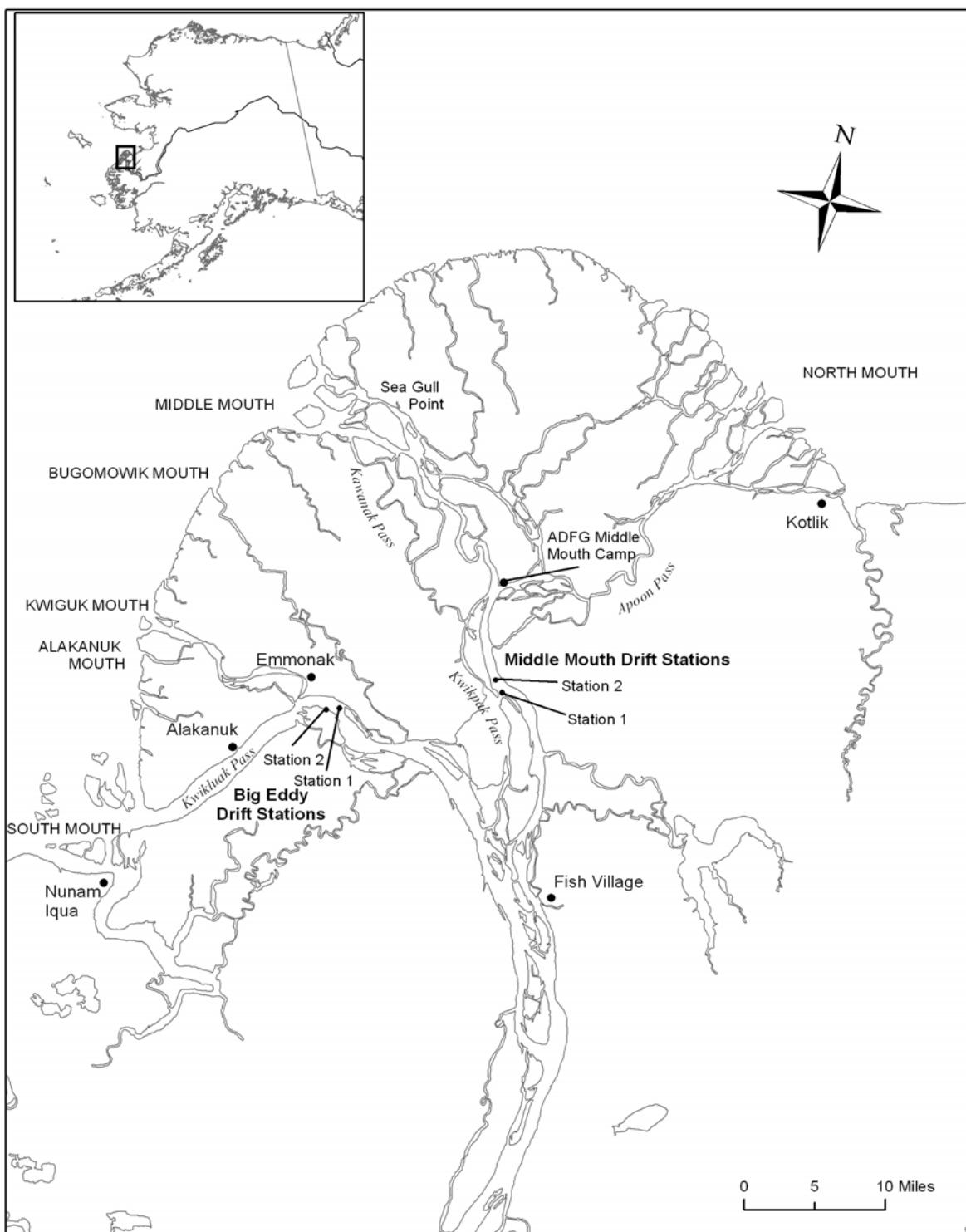


Figure 1.—Drift site locations by station for the cooperative Lower Yukon drift gillnet test fishery, 2008.

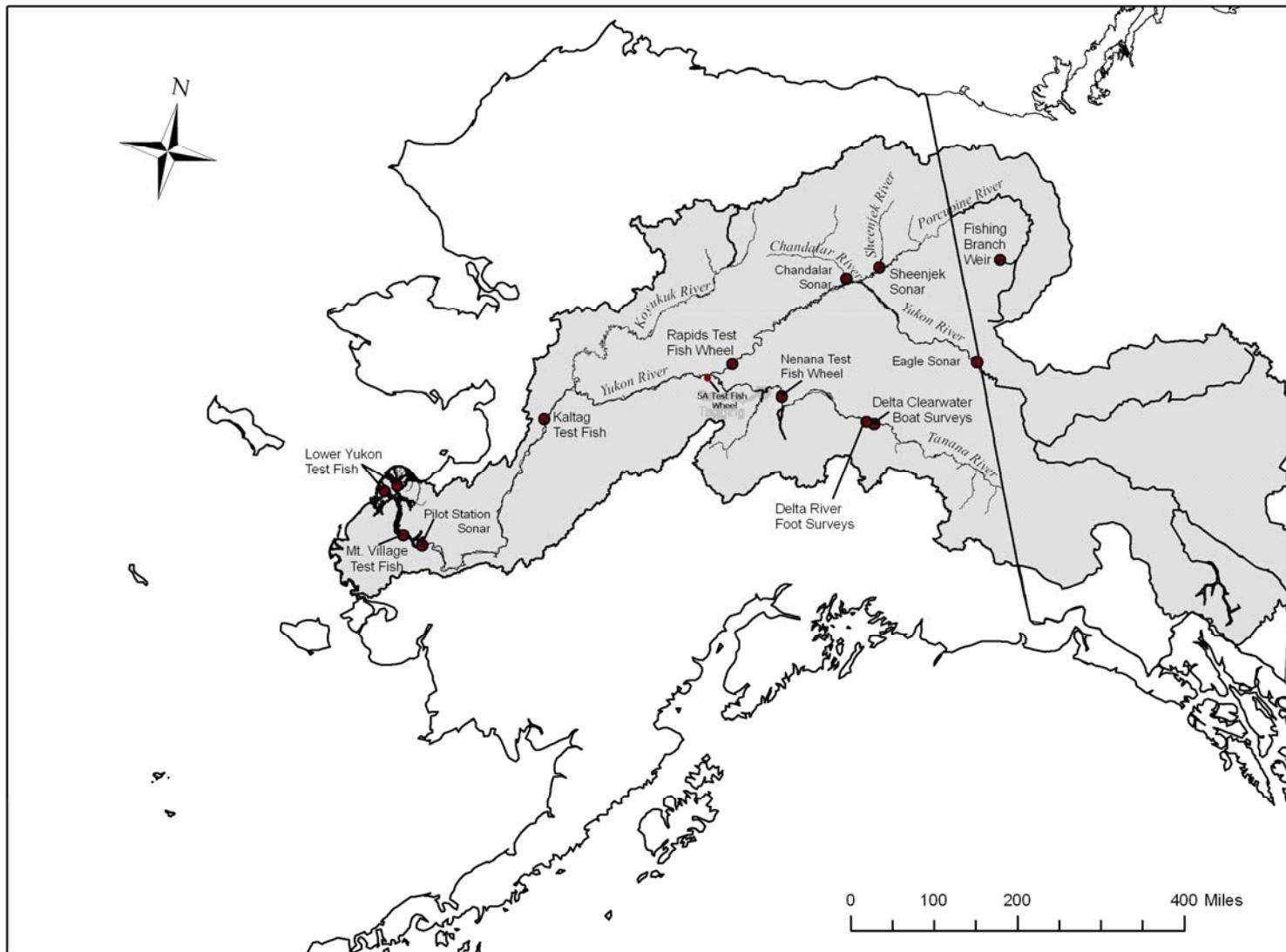


Figure 2.—Project site locations for salmon assessment in the Yukon River drainage, 2008.

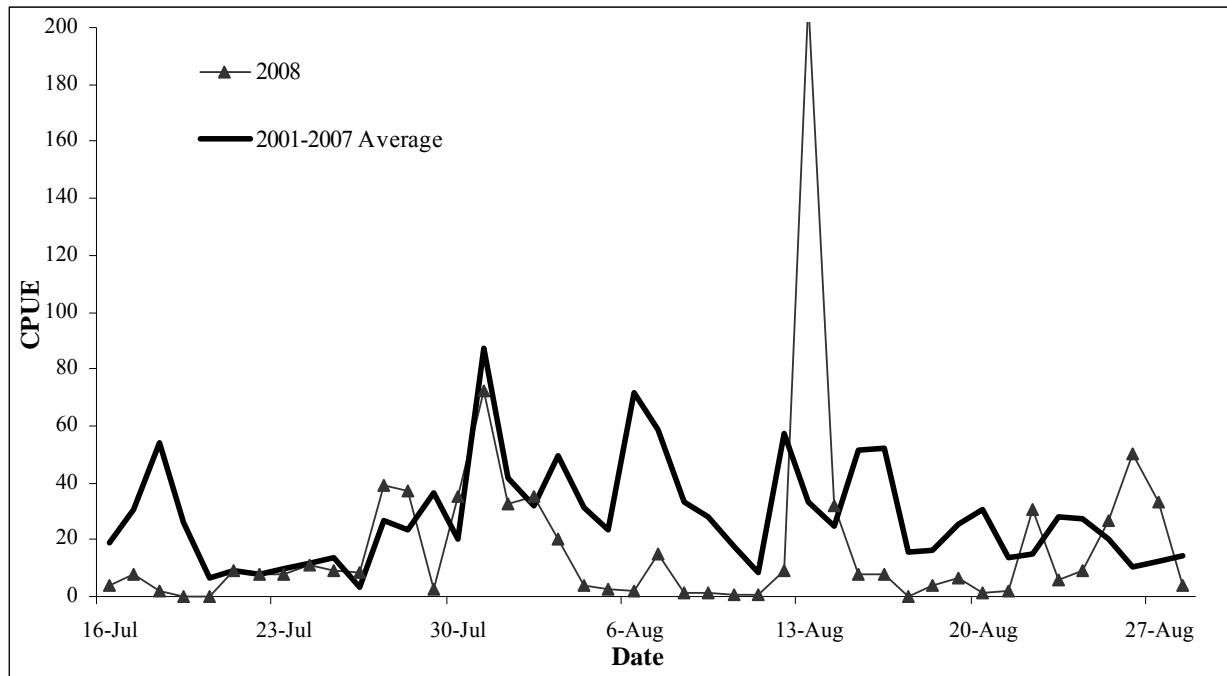


Figure 3.–Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2008 compared to the 2001–2007 average.

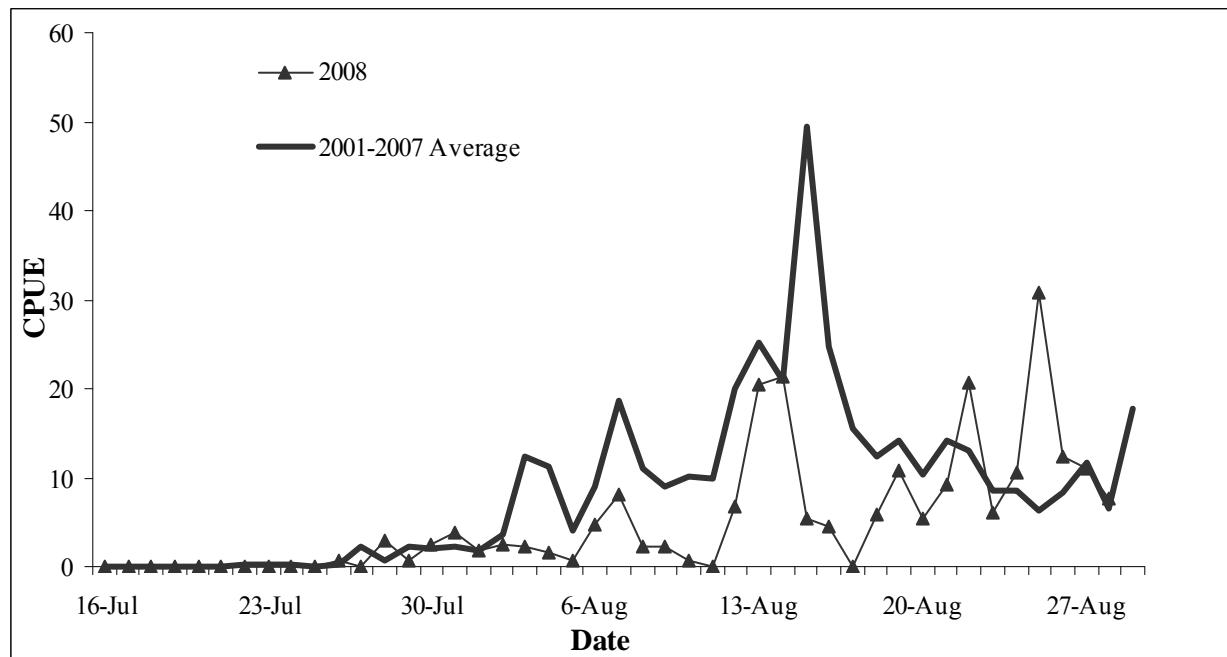


Figure 4.–Daily CPUE for coho salmon in the Lower Yukon drift gillnet fishery, 2008 compared to the 2001–2007 average.

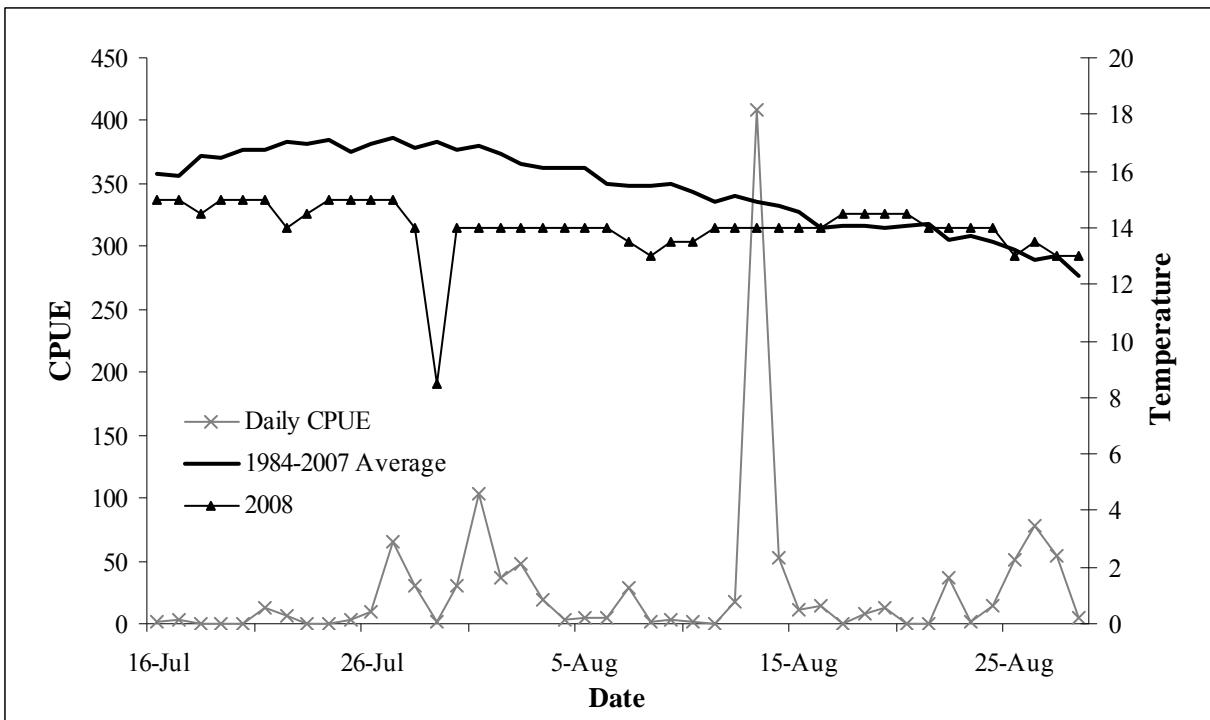


Figure 5.–Daily 2008 fall chum salmon CPUE and water temperature values at Big Eddy compared to 1984–2007 average water temperature values.

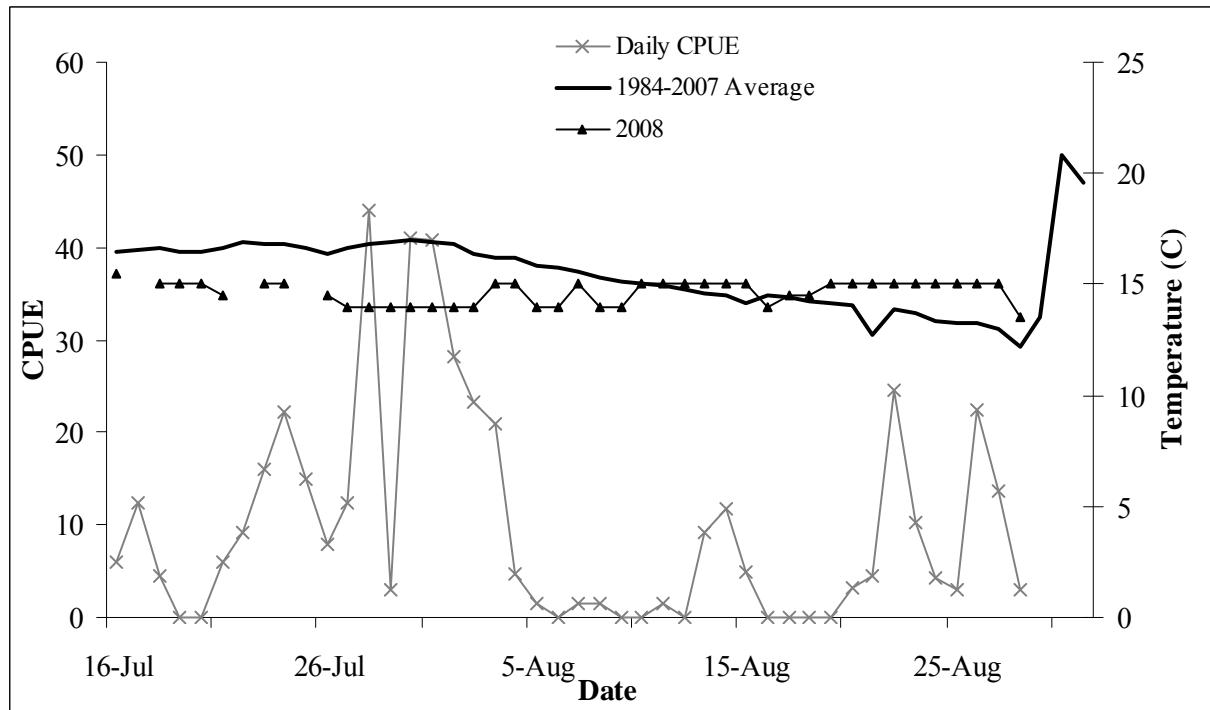


Figure 6.–Daily 2008 fall chum salmon CPUE and water temperature values at Middle Mouth compared to 1984–2007 average water temperature values.

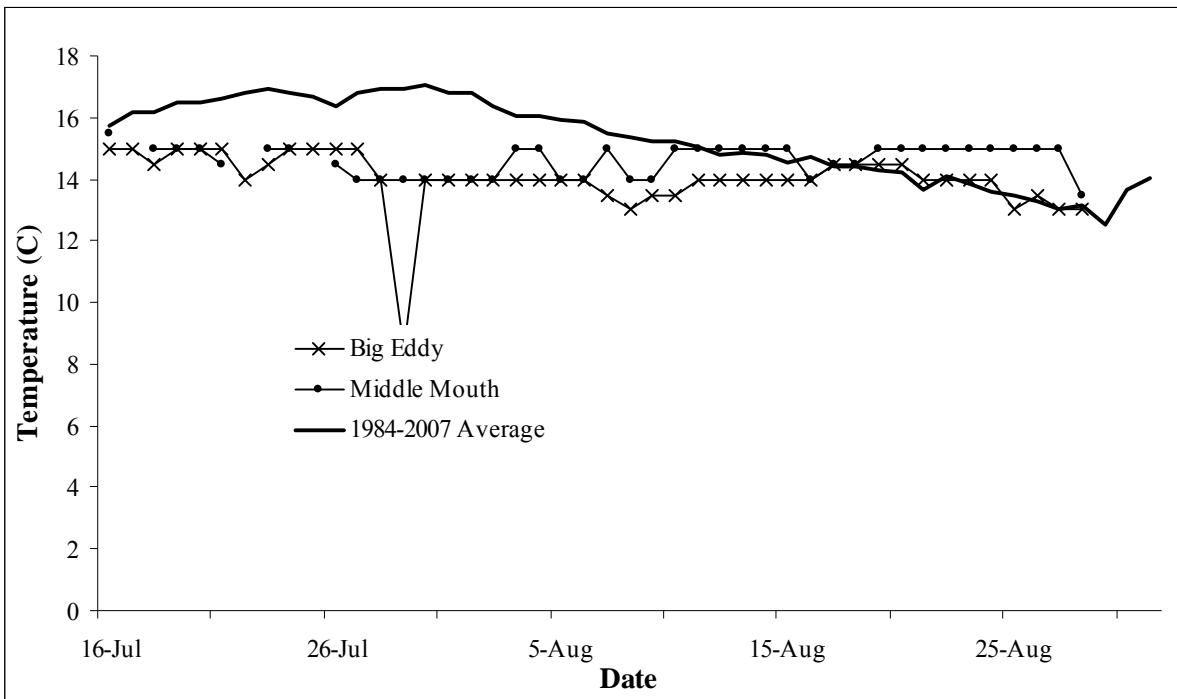


Figure 7.—Daily 2008 water temperature values at Big Eddy and Middle Mouth drift locations compared to 1984–2007 average water temperature values from handheld thermometers.

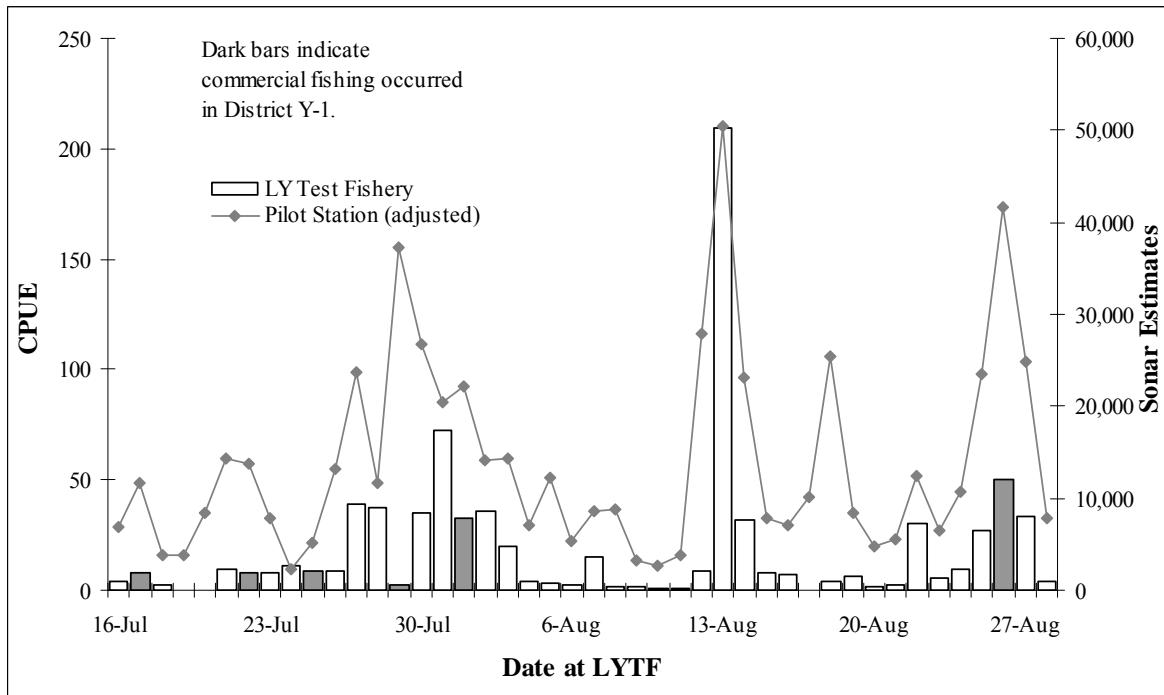


Figure 8.—Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery compared to Pilot Station sonar passage estimates adjusted for transit time, 2008.

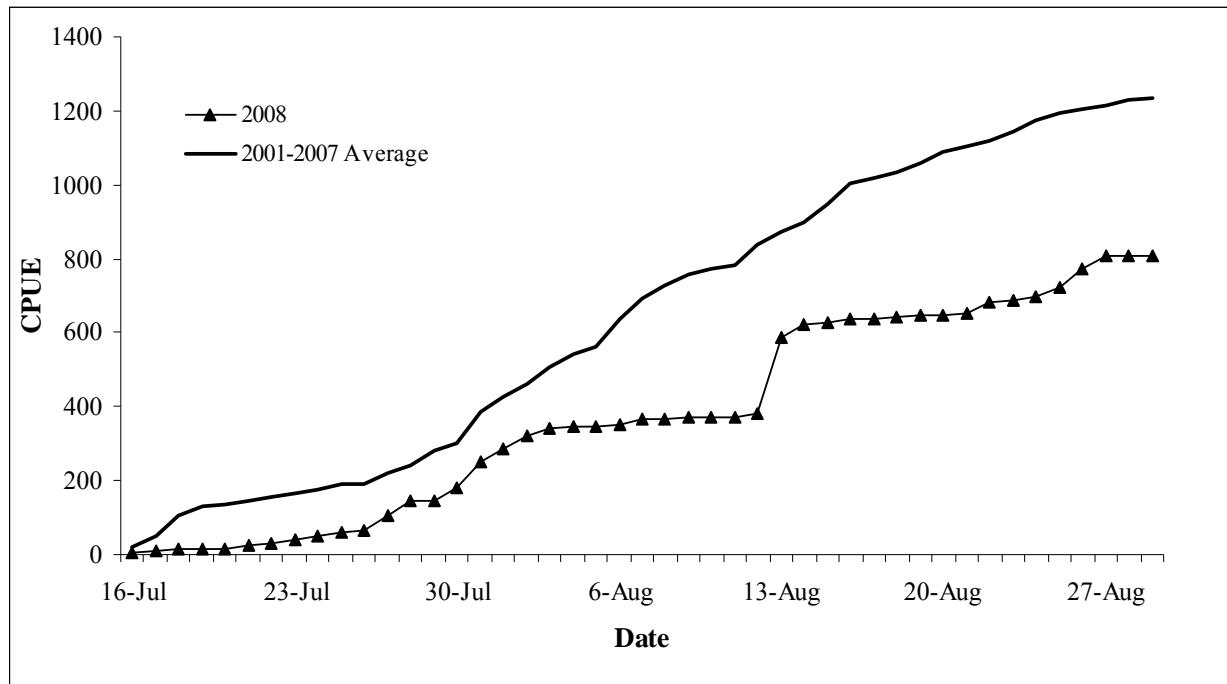


Figure 9.—Cumulative CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery in 2008 compared to 2001–2007.

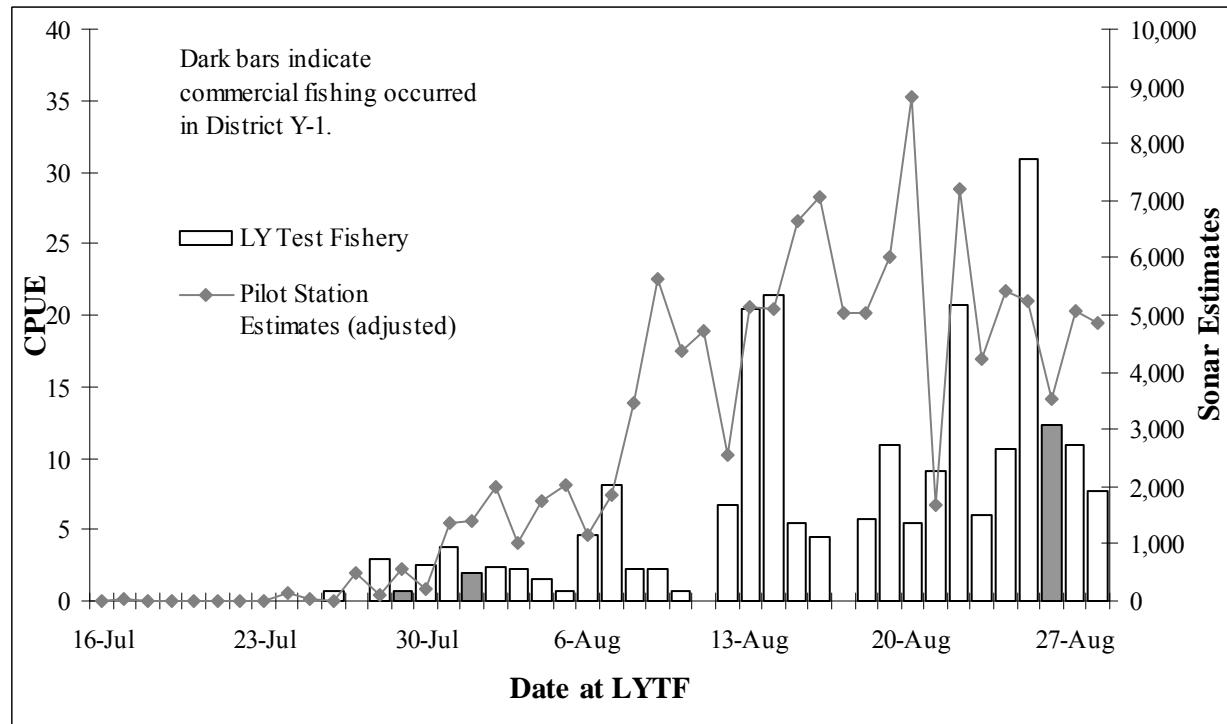


Figure 10.—Daily CPUE for coho salmon from the Lower Yukon drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2008.

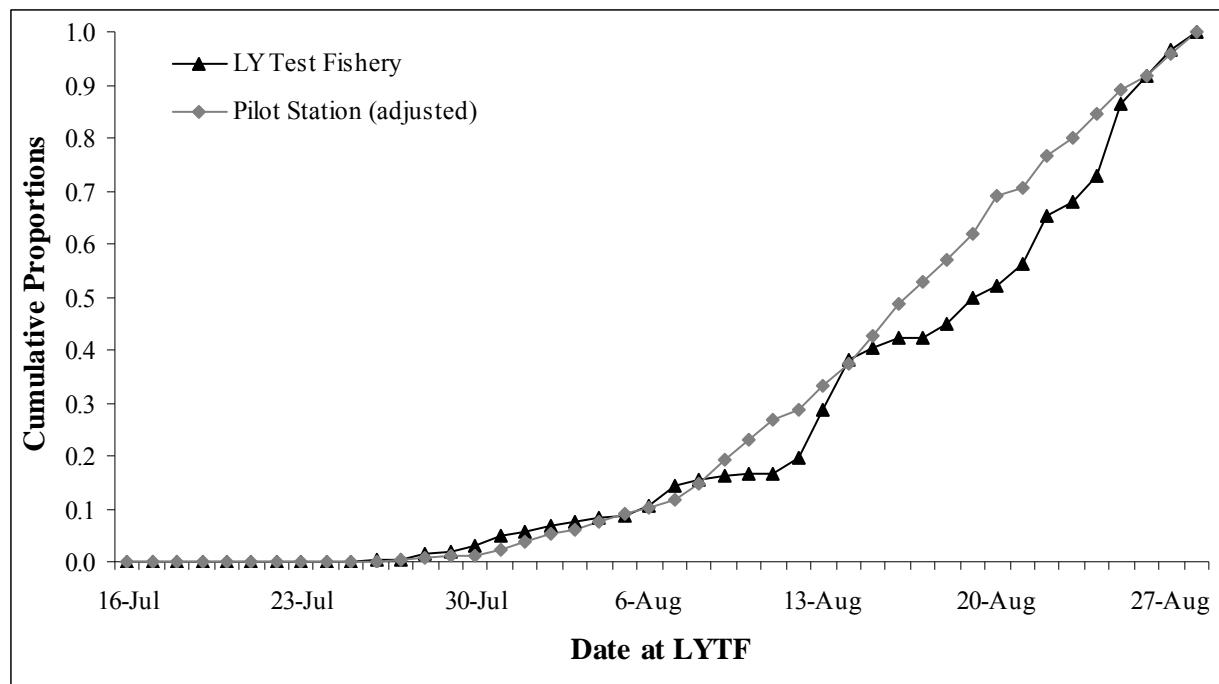


Figure 11.—Cumulative proportions for coho salmon from the Lower Yukon drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2008.

APPENDIX A

Appendix A1.—Fall chum salmon daily and cumulative Pilot Station sonar passage estimates 1995–2007.

	1995				1997				1998				1999				2000				2001				Average Daily ^a
Date	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	1995–1999															
19-Jul	28,257	28,257	0.03	8,187	8,187	0.02	597	597	0.00	8,607	8,607	0.02	4,815	4,815	0.02	18,908	18,908	0.05							12,347
20-Jul	27,712	55,969	0.05	6,501	14,688	0.03	756	1,353	0.00	23,880	32,487	0.09	5,161	9,976	0.04	42,058	60,966	0.16							11,656
21-Jul	39,966	95,935	0.09	3,865	18,553	0.04	1,155	2,508	0.01	13,826	46,313	0.12	1,705	11,681	0.05	26,616	87,582	0.23							14,995
22-Jul	35,047	130,982	0.12	2,415	20,968	0.04	3,841	6,349	0.02	5,475	51,788	0.14	6,095	17,776	0.07	12,741	100,323	0.27							13,768
23-Jul	23,073	154,055	0.15	6,165	27,133	0.05	5,151	11,500	0.03	29,834	81,622	0.22	4,704	22,480	0.09	5,711	106,034	0.28							11,463
24-Jul	2,593	156,648	0.15	1,015	28,148	0.06	2,714	14,214	0.04	31,702	113,324	0.30	2,481	24,961	0.10	4,054	110,088	0.29							2,107
25-Jul	14,150	170,798	0.16	3,578	31,726	0.06	1,301	15,515	0.04	17,319	130,643	0.34	1,754	26,715	0.11	7,339	117,427	0.31							6,343
26-Jul	20,964	191,762	0.18	8,187	39,913	0.08	704	16,219	0.04	4,209	134,852	0.36	4,058	30,773	0.12	16,142	133,569	0.36							9,952
27-Jul	34,722	226,484	0.22	52,395	92,308	0.18	1,328	17,547	0.05	3,617	138,469	0.36	6,215	36,988	0.15	11,463	145,032	0.39							29,482
28-Jul	59,088	285,572	0.27	16,045	108,353	0.21	5,015	22,562	0.06	2,956	141,425	0.37	7,966	44,954	0.18	6,193	151,225	0.40							26,716
29-Jul	62,002	347,574	0.33	20,406	128,759	0.25	3,132	25,694	0.07	6,614	148,039	0.39	7,069	52,023	0.21	5,040	156,265	0.42							28,513
30-Jul	34,664	382,238	0.36	16,009	144,768	0.29	1,475	27,169	0.07	5,846	153,885	0.41	12,939	64,962	0.26	4,648	160,913	0.43							17,383
31-Jul	11,818	394,056	0.37	6,532	151,300	0.30	1,073	28,242	0.08	4,317	158,202	0.42	24,883	89,845	0.36	3,714	164,627	0.44							6,474
1-Aug	7,370	401,426	0.38	4,881	156,181	0.31	2,253	30,495	0.08	18,274	176,476	0.47	14,282	104,127	0.42	3,185	167,812	0.45							4,835
2-Aug	2,799	404,225	0.38	1,088	157,269	0.31	6,223	36,718	0.10	24,966	201,442	0.53	6,068	110,195	0.44	9,719	177,531	0.47							3,370
3-Aug	3,432	407,657	0.39	1,536	158,805	0.31	6,056	42,774	0.11	17,729	219,171	0.58	5,381	115,576	0.47	14,932	192,463	0.51							3,675
4-Aug	2,876	410,533	0.39	761	159,566	0.31	5,112	47,886	0.13	12,225	231,396	0.61	6,711	122,287	0.49	15,589	208,052	0.55							2,916
5-Aug	917	411,450	0.39	25,296	184,862	0.36	3,766	51,652	0.14	10,485	241,881	0.64	3,483	125,770	0.51	23,009	231,061	0.61							9,993
6-Aug	10,841	422,291	0.40	54,489	239,351	0.47	3,617	55,269	0.15	5,327	247,208	0.65	5,097	130,867	0.53	14,642	245,703	0.65							22,982
7-Aug	71,050	493,341	0.47	27,424	266,775	0.53	7,361	62,630	0.17	6,101	253,309	0.67	7,197	138,064	0.56	7,731	253,434	0.67							35,278
8-Aug	41,269	534,610	0.51	15,245	282,020	0.56	6,808	69,438	0.19	6,535	259,844	0.68	3,274	141,338	0.57	7,865	261,299	0.69							21,107
9-Aug	11,260	545,870	0.52	3,584	285,604	0.56	15,820	85,258	0.23	4,236	264,080	0.70	2,746	144,084	0.58	22,280	283,579	0.75							10,221
10-Aug	10,146	556,016	0.53	2,182	287,786	0.57	18,458	103,716	0.28	1,867	265,947	0.70	529	144,613	0.58	14,599	298,178	0.79							10,262
11-Aug	10,805	566,821	0.54	760	288,546	0.57	14,262	117,978	0.32	1,522	267,469	0.70	82	144,695	0.58	11,861	310,039	0.82							8,609
12-Aug	48,335	615,156	0.58	3,914	292,460	0.58	5,601	123,579	0.33	772	268,241	0.71	3,429	148,124	0.60	6,732	316,771	0.84							19,283
13-Aug	22,137	637,293	0.61	6,593	299,053	0.59	3,565	127,144	0.34	824	269,065	0.71	13,392	161,516	0.65	8,121	324,892	0.86							10,765
14-Aug	18,473	655,766	0.62	34,681	333,734	0.66	7,007	134,151	0.36	9,903	278,968	0.74	8,114	169,630	0.68	3,872	328,764	0.87							20,054

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Appendix A1.–Page 2 of 4.

	1995				1997				1998				1999				2000				2001				Average Daily ^a
Date	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	1995–1999			
15-Aug	12,354	668,120	0.63	11,587	345,321	0.68	14,494	148,645	0.40	8,020	286,988	0.76	4,491	174,121	0.70	8,651	337,415	0.90	12,812						
16-Aug	61,720	729,840	0.69	22,745	368,066	0.73	21,868	170,513	0.46	5,749	292,737	0.77	6,509	180,630	0.73	5,693	343,108	0.91	35,444						
17-Aug	56,308	786,148	0.75	18,216	386,282	0.76	22,267	192,780	0.52	5,287	298,024	0.79	4,242	184,872	0.75	3,439	346,547	0.92	32,264						
18-Aug	11,800	797,948	0.76	12,376	398,658	0.79	14,299	207,079	0.56	3,469	301,493	0.79	1,293	186,165	0.75	3,018	349,565	0.93	12,825						
19-Aug	10,784	808,732	0.77	28,153	426,811	0.84	7,877	214,956	0.58	789	302,282	0.80	2,593	188,758	0.76	1,766	351,331	0.93	15,605						
20-Aug	26,327	835,059	0.79	18,763	445,574	0.88	6,826	221,782	0.59	899	303,181	0.80	4,694	193,452	0.78	3,471	354,802	0.94	17,305						
21-Aug	51,434	886,493	0.84	7,171	452,745	0.89	11,678	233,460	0.63	3,529	306,710	0.81	6,164	199,616	0.81	3,536	358,338	0.95	23,428						
22-Aug	35,681	922,174	0.88	3,192	455,937	0.90	5,986	239,446	0.64	22,803	329,513	0.87	4,921	204,537	0.82	1,708	360,046	0.96	14,953						
23-Aug	3,895	926,069	0.88	3,535	459,472	0.91	17,979	257,425	0.69	23,905	353,418	0.93	3,046	207,583	0.84	1,947	361,993	0.96	8,470						
24-Aug	31,668	957,737	0.91	2,616	462,088	0.91	15,557	272,982	0.73	10,748	364,166	0.96	10,103	217,686	0.88	4,080	366,073	0.97	16,614						
25-Aug	42,216	999,953	0.95	1,632	463,720	0.92	9,330	282,312	0.76	5,059	369,225	0.97	5,854	223,540	0.90	3,876	369,949	0.98	17,726						
26-Aug	16,556	1,016,509	0.97	4,850	468,570	0.92	5,994	288,306	0.77	1,100	370,325	0.98	1,865	225,405	0.91	2,169	372,118	0.99	9,133						
27-Aug	6,166	1,022,675	0.97	8,194	476,764	0.94	8,544	296,850	0.80	2,519	372,844	0.98	1,150	226,555	0.91	909	373,027	0.99	7,635						
28-Aug	1,950	1,024,625	0.97	5,339	482,103	0.95	4,615	301,465	0.81	1,328	374,172	0.99	475	227,030	0.92	557	373,584	0.99	3,968						
29-Aug	2,997	1,027,622	0.98	9,472	491,575	0.97	2,901	304,366	0.82	1,456	375,628	0.99	492	227,522	0.92	343	373,927	0.99	5,123						
30-Aug	1,076	1,028,698	0.98	8,577	500,152	0.99	2,264	306,630	0.82	3,148	378,776	1.00	2,499	230,021	0.93	1,307	375,234	1.00	3,972						
31-Aug	976	1,029,674	0.98	6,469	506,621	1.00	2,433	309,063	0.83	717	379,493	1.00	2,433	232,454	0.94	948	376,182	1.00	3,293						
1-Sep	7,941	1,037,615	0.99		2,500	311,563	0.84						1,465	233,919	0.94					5,221					
2-Sep	8,943	1,046,558	0.99		1,333	312,896	0.84						2,715	236,634	0.95					5,138					
3-Sep	6,687	1,053,245	1.00		3,595	316,491	0.85						2,680	239,314	0.97					5,141					
4-Sep				10,772	327,263	0.88							963	240,277	0.97					10,772					
5-Sep				18,565	345,828	0.93							1,816	242,093	0.98					18,565					
6-Sep				13,561	359,389	0.96							794	242,887	0.98					13,561					
7-Sep				6,177	365,566	0.98							900	243,787	0.98					6,177					
8-Sep				4,187	369,753	0.99							1,233	245,020	0.99					4,187					
9-Sep				3,174	372,927	1.00							1,455	246,475	0.99					3,174					
10-Sep													318	246,793	1.00										
11-Sep													448	247,241	1.00										
12-Sep													50	247,291	1.00										
13-Sep													479	247,770	1.00										
14-Sep													165	247,935	1.00										
Total	1,055,240			508,618			374,925			381,492			249,935			378,183			630,619						

-continued-

Appendix A1.–Page 3 of 4.

	2002				2003				2004				2005				2006				2007				Average Daily ^a
Date	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	1995–2007
19-Jul	9,451	9,451	0.03	6,687	6,687	0.01	484	484	0.00	16,305	16,305	0.01	54,044	54,044	0.07	19,920	19,920	0.03							13,113
20-Jul	5,494	14,945	0.05	12,982	19,669	0.02	1,269	1,753	0.00	20,651	36,956	0.02	33,374	87,418	0.11	9,056	28,976	0.04							12,236
21-Jul	9,365	24,310	0.07	10,755	30,424	0.03	5,261	7,014	0.01	105,208	142,164	0.08	13,912	101,330	0.13	9,606	38,582	0.06							17,885
22-Jul	3,197	27,507	0.08	7,765	38,189	0.04	28,352	35,366	0.06	64,728	206,892	0.11	9,772	111,102	0.14	4,970	43,552	0.06							14,305
23-Jul	1,339	28,846	0.09	5,257	43,446	0.05	18,856	54,222	0.09	25,050	231,942	0.13	15,119	126,221	0.16	6,239	49,791	0.07							11,732
24-Jul	1,348	30,194	0.09	22,114	65,560	0.07	5,379	59,601	0.10	7,077	239,019	0.13	14,423	140,644	0.18	1,928	51,719	0.08							7,731
25-Jul	1,323	31,517	0.10	21,321	86,881	0.10	2,041	61,642	0.10	5,302	244,321	0.13	14,848	155,492	0.20	1,876	53,595	0.08							7,068
26-Jul	2,494	34,011	0.10	15,999	102,880	0.12	3,249	64,891	0.11	3,343	247,664	0.14	11,406	166,898	0.21	1,528	55,123	0.08							6,345
27-Jul	19,646	53,657	0.16	8,265	111,145	0.12	3,646	68,537	0.12	4,252	251,916	0.14	7,559	174,457	0.22	2,845	57,968	0.08							12,041
28-Jul	21,180	74,837	0.23	4,648	115,793	0.13	2,822	71,359	0.12	4,753	256,669	0.14	8,601	183,058	0.23	3,418	61,386	0.09							11,374
29-Jul	13,488	88,325	0.27	28,576	144,369	0.16	3,914	75,273	0.13	6,082	262,751	0.14	34,808	217,866	0.28	2,168	63,554	0.09							15,688
30-Jul	21,209	109,534	0.34	30,546	174,915	0.20	915	76,188	0.13	2,722	265,473	0.15	81,784	299,650	0.38	7,788	71,342	0.10							17,991
31-Jul	4,964	114,498	0.35	23,665	198,580	0.22	1,754	77,942	0.13	13,097	278,570	0.15	52,994	352,644	0.45	12,667	84,009	0.12							13,147
1-Aug	1,214	115,712	0.35	15,830	214,410	0.24	2,100	80,042	0.13	41,245	319,815	0.18	41,542	394,186	0.50	6,778	90,787	0.13							12,981
2-Aug	399	116,111	0.36	13,554	227,964	0.26	3,755	83,797	0.14	66,121	385,936	0.21	34,668	428,854	0.54	4,306	95,093	0.14							13,662
3-Aug	5,577	121,688	0.37	7,662	235,626	0.26	30,383	114,180	0.19	59,275	445,211	0.25	22,534	451,388	0.57	4,880	99,973	0.15							13,704
4-Aug	2,676	124,364	0.38	4,187	239,813	0.27	68,687	182,867	0.31	14,167	459,378	0.25	16,438	467,826	0.59	10,709	110,682	0.16							12,046
5-Aug	1,721	126,085	0.39	48,993	288,806	0.32	21,179	204,046	0.34	2,059	461,437	0.25	5,083	472,909	0.60	8,874	119,556	0.17							10,988
6-Aug	429	126,514	0.39	105,548	394,354	0.44	8,232	212,278	0.36	1,676	463,113	0.26	4,936	477,845	0.60	2,319	121,875	0.18							16,876
7-Aug	303	126,817	0.39	34,038	428,392	0.48	4,709	216,987	0.37	94,704	557,817	0.31	8,841	486,686	0.62	831	122,706	0.18							21,880
8-Aug	223	127,040	0.39	10,773	439,165	0.49	3,837	220,824	0.37	314,186	872,003	0.48	8,537	495,223	0.63	22,437	145,143	0.21							36,094
9-Aug	2,507	129,547	0.40	3,391	442,556	0.50	2,864	223,688	0.38	241,724	1,113,727	0.61	8,270	503,493	0.64	123,185	268,328	0.39							34,966
10-Aug	5,193	134,740	0.41	842	443,398	0.50	37,201	260,889	0.44	117,816	1,231,543	0.68	5,895	509,388	0.64	91,991	360,319	0.53							24,343
11-Aug	15,542	150,282	0.46	2,323	445,721	0.50	51,238	312,127	0.53	43,797	1,275,340	0.70	8,039	517,427	0.65	24,758	385,077	0.56							14,427
12-Aug	15,993	166,275	0.51	3,583	449,304	0.50	20,242	332,369	0.56	19,238	1,294,578	0.71	5,020	522,447	0.66	6,752	391,829	0.57							11,073
13-Aug	11,111	177,386	0.54	10,183	459,487	0.52	5,717	338,086	0.57	24,383	1,318,961	0.73	3,058	525,505	0.66	12,839	404,668	0.59							9,484
14-Aug	12,220	189,606	0.58	25,509	484,996	0.55	2,651	340,737	0.57	16,141	1,335,102	0.74	39,880	565,385	0.72	16,880	421,548	0.62							15,955

-continued-

Appendix A1.–Page 4 of 4.

	2002				2003				2004				2005				2006				2007				Average Daily ^a
Date	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	Daily	Cum	%	1995–2007			
15-Aug	6,237	195,843	0.60	9,461	494,457	0.56	2,819	343,556	0.58	4,740	1,339,842	0.74	72,723	638,108	0.81	85,911	507,459	0.74				19,403			
16-Aug	3,098	198,941	0.61	47,168	541,625	0.61	9,862	353,418	0.59	14,088	1,353,930	0.75	18,576	656,684	0.83	57,178	564,637	0.83				22,380			
17-Aug	5,903	204,844	0.63	125,252	666,877	0.75	11,878	365,296	0.61	21,888	1,375,818	0.76	8,550	665,234	0.84	17,573	582,210	0.85				24,780			
18-Aug	57,477	262,321	0.80	100,040	766,917	0.86	8,432	373,728	0.63	5,694	1,381,512	0.76	10,715	675,949	0.86	5,250	587,460	0.86				19,237			
19-Aug	28,103	290,424	0.89	27,690	794,607	0.89	2,214	375,942	0.63	4,458	1,385,970	0.76	13,420	689,369	0.87	2,507	589,967	0.86				10,716			
20-Aug	9,921	300,345	0.92	13,972	808,579	0.91	1,641	377,583	0.64	27,157	1,413,127	0.78	17,370	706,739	0.89	2,710	592,677	0.87				10,857			
21-Aug	6,139	306,484	0.94	7,102	815,681	0.92	146	377,729	0.64	54,024	1,467,151	0.81	7,674	714,413	0.90	1,269	593,946	0.87				13,028			
22-Aug	2,639	309,123	0.95	1,989	817,670	0.92	30,334	408,063	0.69	34,079	1,501,230	0.83	24,403	738,816	0.93	5,451	599,397	0.88				14,290			
23-Aug	1,348	310,471	0.95	6,227	823,897	0.93	30,096	438,159	0.74	42,392	1,543,622	0.85	4,899	743,715	0.94	3,856	603,253	0.88				11,765			
24-Aug	4,278	314,749	0.96	17,354	841,251	0.95	6,241	444,400	0.75	36,354	1,579,976	0.87	3,904	747,619	0.95	1,872	605,125	0.88				11,725			
25-Aug	3,505	318,254	0.97	10,218	851,469	0.96	7,050	451,450	0.76	53,660	1,633,636	0.90	9,223	756,842	0.96	1,434	606,559	0.89				12,432			
26-Aug	2,785	321,039	0.98	12,981	864,450	0.97	5,732	457,182	0.77	70,337	1,703,973	0.94	7,145	763,987	0.97	17,659	624,218	0.91				12,250			
27-Aug	945	321,984	0.99	12,191	876,641	0.99	10,887	468,069	0.79	51,063	1,755,036	0.97	3,287	767,274	0.97	21,596	645,814	0.94				10,545			
28-Aug	767	322,751	0.99	6,685	883,326	0.99	22,611	490,680	0.83	21,440	1,776,476	0.98	3,255	770,529	0.97	3,972	649,786	0.95				6,036			
29-Aug	964	323,715	0.99	3,964	887,290	1.00	67,869	558,549	0.94	16,256	1,792,732	0.99	6,214	776,743	0.98	8,292	658,078	0.96				10,073			
30-Aug	761	324,476	0.99	1,840	889,130	1.00	34,095	592,644	1.00	10,888	1,803,620	0.99	7,789	784,532	0.99	11,343	669,421	0.98				7,023			
31-Aug	2,382	326,858	1.00	648	889,778	1.00	1,416	594,060	1.00	9,969	1,813,589	1.00	6,031	790,563	1.00	14,590	684,011	1.00				4,005			
1-Sep																						2,977			
2-Sep																						3,248			
3-Sep																						3,241			
4-Sep																						3,912			
5-Sep																						6,794			
6-Sep																						4,785			
7-Sep																						2,359			
8-Sep																						1,807			
9-Sep																						1,543			
10-Sep																						159			
11-Sep																						224			
12-Sep																						25			
13-Sep																						240			
14-Sep																						83			
Total	328,860			891,781			596,064			1,815,594			792,569			686,018			639,145						

Note: The box within the column indicates the first to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box.

^a Data from 2001 was not used due to high water events that occurred throughout the duration of the project.

Appendix A2.—Mean fishing times for the Lower Yukon drift gillnet test fishery, 2008.

Date	Drift Gillnet Test Fishery Mean Fishing Times (min)												
	Big Eddy						Middle Mouth						
	Catch					Fall Chum	Catch					Fall Chum	
Date	1	2	3	4	Total	Catch	1	2	3	4	Total	Catch	
16-Jul	19.0	19.5	17.5	17.5	73.5	1	0	21.0	20.5	20.0	20.5	82.0	4
17-Jul ^a	19.5	19.0	-	-	38.5	1	0	19.5	20.5	-	-	40.0	4
18-Jul	21.5	18.5	23.5	19.5	83.0	0	0	20.0	20.0	19.5	19.5	79.0	3
19-Jul	20.5	19.5	19.5	19.0	78.5	0	0	20.5	19.5	20.5	17.5	78.0	0
20-Jul	20.5	19.0	19.0	19.0	77.5	0	0	20.0	20.5	20.5	20.5	81.5	0
21-Jul	18.5	19.0	18.5	19.0	75.0	8	0	20.5	20.5	20.0	20.5	81.5	4
22-Jul ^a	20.0	18.5	-	-	38.5	2	0	20.0	19.5	-	-	39.5	3
23-Jul	19.0	19.0	19.0	19.5	76.5	0	0	19.0	18.0	19.0	20.0	76.0	10
24-Jul	22.0	19.5	19.0	19.5	80.0	0	0	20.5	20.5	20.0	20.5	81.5	15
25-Jul ^a	20.0	19.0	-	-	39.0	1	0	20.0	25.5	-	-	45.5	5
26-Jul	21.0	19.5	19.5	20.0	80.0	6	1 ^b	19.5	21.5	19.5	-	60.5	4
27-Jul	18.5	21.5	18.5	16.5	75.0	46	0	20.0	19.5	19.5	19.5	78.5	8
28-Jul	19.5	20.0	20.5	18.0	78.0	20	2	20.5	21.5	21.0	21.0	84.0	31
29-Jul ^a	20.5	18.5	18.0	18.5	75.5	1	0	20.5	20.0	21.0	19.0	80.5	2
30-Jul	18.5	18.5	20.5	17.0	74.5	18	2	19.0	19.5	17.0	19.5	75.0	25
31-Jul	18.0	20.5	19.5	18.0	76.0	70	5	19.5	19.5	19.5	18.5	77.0	22
1-Aug ^a	18.5	13.5	18.5	19.5	70.0	21	1	19.0	20.0	19.0	19.0	77.0	18
2-Aug	18.5	18.0	18.5	18.5	73.5	29	3	20.0	19.0	19.0	18.5	76.5	15
3-Aug	19.5	19.0	19.5	19.0	77.0	12	1	20.5	19.5	20.0	18.5	78.5	14
4-Aug	18.5	18.0	20.5	19.5	76.5	2	2	18.5	20.5	19.5	19.5	78.0	3
5-Aug	19.0	19.0	22.0	21.0	81.0	3	0	19.5	19.0	20.5	18.5	77.5	1
6-Aug	22.0	19.0	19.5	18.5	79.0	3	6	21.5	19.5	19.5	19.5	80.0	0
7-Aug	18.5	19.0	18.5	21.5	77.5	20	11	19.5	19.5	19.5	19.5	78.0	1
8-Aug	18.5	18.5	18.5	19.0	74.5	1	0	19.5	19.5	21.0	19.5	79.5	1
9-Aug	23.5	19.5	19.0	19.5	81.5	2	1 ^c	21.0	-	19.5	19.5	60.0	0
10-Aug	21.0	20.0	19.0	19.0	79.0	1	0	20.5	19.5	20.0	20.5	80.5	0
11-Aug	18.5	19.0	18.0	18.5	74.0	0	0	19.5	19.5	19.5	19.5	78.0	1
12-Aug	20.5	20.5	20.5	20.0	81.5	12	8	19.5	19.5	18.5	19.5	77.0	0
13-Aug	20.0	15.0	19.0	18.5	72.5	228	20	19.5	19.5	19.5	19.5	78.0	6
14-Aug	18.5	17.0	19.0	19.0	73.5	30	18	16.5	20.0	19.5	19.5	75.5	7
15-Aug	19.0	19.5	18.5	19.5	76.5	7	5	20.0	19.5	21.5	19.5	80.5	3
16-Aug	18.5	20.0	18.5	19.0	76.0	10	6	19.5	19.5	20.5	19.5	79.0	0
17-Aug	18.5	18.5	19.5	17.0	73.5	0	0	19.5	19.5	19.5	19.5	78.0	0
18-Aug	18.5	21.0	19.5	19.5	78.5	5	3	19.5	19.5	19.5	20.5	79.0	0
19-Aug	20.0	23.5	20.0	20.0	83.5	10	17	19.5	19.5	19.5	19.5	78.0	0
20-Aug	20.0	19.5	19.5	20.0	79.0	0	2	20.0	19.5	20.0	20.0	79.5	2
21-Aug	20.0	20.0	20.5	20.0	80.5	0	1	19.5	19.5	19.5	10.0	68.5	2
22-Aug	19.5	20.0	19.5	22.5	81.5	27	12	20.0	19.5	20.0	21.5	81.0	17
23-Aug	20.0	19.0	19.5	20.5	79.0	1	0	20.0	20.0	20.0	20.5	80.5	7
24-Aug	19.5	20.0	20.0	18.5	78.0	9	6	20.0	21.0	19.5	20.5	81.0	3
25-Aug	19.5	20.0	18.5	22.0	80.0	30	23	20.0	19.5	20.0	19.5	79.0	2
26-Aug ^a	20.0	18.5	-	-	38.5	24	3	21.5	21.0	-	-	42.5	8
27-Aug	19.0	23.5	20.5	21.5	84.5	41	10	21.0	20.0	19.0	19.5	79.5	9
28-Aug	19.5	19.5	20.5	19.5	79.0	3	1	20.0	19.5	19.5	19.5	78.5	2
Daily Average					74.0							74.5	
Drift Average					19.4							19.8	
Total Catch					705		170					262	98

^a Commercial fishing occurred on this day.

^b Only 3 drifts for the day due to rough water.

^c The drift hit a snag early into the drift.

Appendix A3.—Historical CPUE data for fall chum salmon at Big Eddy drift gillnet test fishery site, 2001–2008.

Date	2001			2002			2003			2004			2005		
	Daily	Cumulative	%	Daily	Cumulative	%	Daily	Cumulative	%	Daily	Cumulative	%	Daily	Cumulative	%
	Index	Index		Index	Index		Index	Index		Index	Index		Index	Index	
16-Jul	37.62	0.03	37.62	1.58	0.00	1.58	1.54	0.00	1.54	0.00	0.00	0.00	7.46	0.00	7.46
17-Jul	171.69	0.18	209.31	19.12	0.02	20.70	4.7	0.00	6.24	0.00	0.00	0.00	23.47	0.01	30.93
18-Jul	72.24	0.24	281.55	0.00	0.02	20.70	0	0.00	6.24	0.00	0.00	0.00	460.35	0.14	491.28
19-Jul	16.06	0.25	297.61	0.00	0.02	20.70	3.67	0.01	9.91	62.73	0.12	62.73	185.00	0.19	676.28
20-Jul	0.00	0.25	297.61	0.00	0.02	20.70	1.62	0.01	11.53	7.91	0.14	70.64	25.69	0.20	701.97
21-Jul	0.00	0.25	297.61	0.00	0.02	20.70	1.71	0.01	13.24	16.62	0.17	87.26	1.43	0.20	703.40
22-Jul	8.11	0.26	305.72	0.00	0.02	20.70	7.73	0.02	20.97	1.58	0.17	88.84	1.71	0.20	705.11
23-Jul	79.46	0.33	385.18	0.00	0.02	20.70	1.67	0.02	22.64	1.58	0.17	90.42	0.00	0.20	705.11
24-Jul	36.00	0.36	421.18	0.00	0.02	20.70	0	0.02	22.64	1.54	0.18	91.96	2.79	0.20	707.90
25-Jul	3.00	0.36	424.18	108.59	0.09	129.29	0	0.02	22.64	1.50	0.18	93.46	1.54	0.20	709.44
26-Jul	1.50	0.36	425.68	3.24	0.10	132.53	13.21	0.03	35.85	7.14	0.19	100.60	7.58	0.20	717.02
27-Jul	18.00	0.38	443.68	17.04	0.11	149.57	163.31	0.15	199.16	0.00	0.19	100.60	3.00	0.20	720.02
28-Jul	7.65	0.39	451.33	69.02	0.16	218.59	7.14	0.15	206.30	0.00	0.19	100.60	10.77	0.21	730.79
29-Jul	0.00	0.39	451.33	55.12	0.20	273.71	4.58	0.15	210.88	0.00	0.19	100.60	207.55	0.27	938.34
30-Jul	12.00	0.40	463.33	0.00	0.20	273.71	3.17	0.16	214.05	0.00	0.19	100.60	66.94	0.28	1,005.28
31-Jul	80.11	0.46	543.44	0.00	0.20	273.71	0	0.16	214.05	13.77	0.22	114.37	933.14	0.55	1,938.42
1-Aug	7.78	0.47	551.22	28.06	0.22	301.77	0	0.16	214.05	131.66	0.47	246.03	66.43	0.57	2,004.85
2-Aug	151.88	0.60	703.10	1.54	0.22	303.31	0	0.16	214.05	59.61	0.59	305.64	1.50	0.57	2,006.35
3-Aug	64.58	0.66	767.68	8.68	0.23	311.99	220.22	0.32	434.27	0.00	0.59	305.64	2.93	0.57	2,009.28
4-Aug	18.83	0.67	786.51	0.00	0.23	311.99	240.22	0.49	674.49	0.00	0.59	305.64	0.00	0.57	2,009.28
5-Aug	12.41	0.68	798.92	1.58	0.23	313.57	9.64	0.50	684.13	0.00	0.59	305.64	246.35	0.64	2,255.63
6-Aug	170.67	0.83	969.59	0.00	0.23	313.57	3.08	0.50	687.21	0.00	0.59	305.64	513.51	0.78	2,769.14
7-Aug	100.47	0.91	1,070.06	34.65	0.26	348.22	0	0.50	687.21	1.46	0.59	307.10	93.04	0.81	2,862.18
8-Aug	2.22	0.92	1,072.28	33.09	0.28	381.31	0	0.50	687.21	102.31	0.78	409.41	36.93	0.82	2,899.11
9-Aug	11.79	0.93	1,084.07	183.93	0.41	565.24	5.69	0.51	692.90	50.06	0.88	459.47	11.29	0.82	2,910.40
10-Aug	24.27	0.95	1,108.34	98.26	0.49	663.50	49.09	0.54	741.99	7.43	0.90	466.90	23.41	0.83	2,933.81
11-Aug	1.36	0.95	1,109.70	30.97	0.51	694.47	4.74	0.54	746.73	0.00	0.90	466.90	32.80	0.84	2,966.61
12-Aug	28.40	0.97	1,138.10	41.88	0.54	736.35	65.82	0.59	812.55	0.00	0.90	466.90	5.00	0.84	2,971.61
13-Aug	3.62	0.97	1,141.72	23.25	0.56	759.60	0	0.59	812.55	3.54	0.90	470.44	2.93	0.84	2,974.54
14-Aug	1.50	0.98	1,143.22	10.90	0.57	770.50	55.4	0.63	867.95	2.74	0.91	473.18	18.82	0.85	2,993.36
15-Aug	0.00	0.98	1,143.22	37.29	0.59	807.79	354.34	0.89	1,222.29	0.00	0.91	473.18	31.26	0.86	3,024.62
16-Aug	0.00	0.98	1,143.22	448.29	0.92	1,256.08	45.34	0.92	1,267.63	0.00	0.91	473.18	11.75	0.86	3,036.37
17-Aug	1.58	0.98	1,144.80	44.46	0.95	1,300.54	4.76	0.93	1,272.39	1.28	0.91	474.46	26.07	0.87	3,062.44
18-Aug	0.00	0.98	1,144.80	10.67	0.96	1,311.21	4.62	0.93	1,277.01	0.00	0.91	474.46	132.60	0.91	3,195.04
19-Aug	0.00	0.98	1,144.80	6.32	0.97	1,317.53	0	0.93	1,277.01	0.00	0.91	474.46	124.97	0.94	3,320.01
20-Aug	3.08	0.98	1,147.88	0.00	0.97	1,317.53	0	0.93	1,277.01	5.55	0.92	480.01	26.61	0.95	3,346.62
21-Aug	21.95	1.00	1,169.83	8.28	0.97	1,325.81	7.84	0.94	1,284.85	1.50	0.92	481.51	12.70	0.95	3,359.32
22-Aug	1.50	1.00	1,171.33	22.90	0.99	1,348.71	3.2	0.94	1,288.05	1.54	0.93	483.05	11.16	0.95	3,370.48
23-Aug	0.00	1.00	1,171.33	6.40	0.99	1,355.11	57.67	0.98	1,345.72	0.00	0.93	483.05	16.92	0.96	3,387.40
24-Aug	0.00	1.00	1,171.33	0.00	0.99	1,355.11	19.34	1.00	1,365.06	11.61	0.95	494.66	35.67	0.97	3,423.07
25-Aug	0.00	1.00	1,171.33	0.00	0.99	1,355.11	6	1.00	1,371.06	0.00	0.95	494.66	32.12	0.98	3,455.19
26-Aug	0.00	1.00	1,171.33	0.00	0.99	1,355.11	0	1.00	1,371.06	18.01	0.98	512.67	13.62	0.98	3,468.81
27-Aug	0.00	1.00	1,171.33	1.58	1.00	1,356.69	0	1.00	1,371.06	8.94	1.00	521.61	22.90	0.99	3,491.71
28-Aug	0.00	1.00	1,171.33	6.15	1.00	1,362.84	0	1.00	1,371.06	0.00	1.00	521.61	19.10	0.99	3,510.81
29-Aug	—	—	1,171.33	—	—	1,362.84	—	—	1,371.06	—	—	521.61	19.50	1.00	3,530.31
Total	1,171.33			1,362.84			1,371.06			521.61			3,510.81		

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Appendix A3.–Page 2 of 2.

Date	2006			2007			2008			Average 2001–2007		
	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index
16-Jul	74.31	0.08	74.31	5.37	0.00	5.37	1.71	0.00	1.71	18.27	0.02	18.27
17-Jul	9.23	0.09	83.54	6.11	0.01	11.48	3.08	0.00	4.79	33.47	0.04	51.74
18-Jul	6.00	0.09	89.54	1.58	0.01	13.06	0.00	0.00	4.79	77.17	0.07	128.91
19-Jul	0.00	0.09	89.54	1.58	0.01	14.64	0.00	0.00	4.79	38.43	0.10	167.34
20-Jul	0.00	0.09	89.54	3.55	0.01	18.19	0.00	0.00	4.79	5.54	0.10	172.88
21-Jul	20.19	0.12	109.73	0.00	0.01	18.19	12.63	0.01	17.42	5.71	0.11	178.59
22-Jul	4.50	0.12	114.23	0.00	0.01	18.19	6.49	0.02	23.91	3.38	0.11	181.97
23-Jul	1.50	0.12	115.73	0.00	0.01	18.19	0.00	0.02	23.91	12.03	0.12	194.00
24-Jul	4.66	0.13	120.39	0.00	0.01	18.19	0.00	0.02	23.91	6.43	0.13	200.42
25-Jul	0.00	0.13	120.39	0.00	0.01	18.19	3.16	0.02	27.07	16.38	0.14	216.80
26-Jul	0.00	0.13	120.39	0.00	0.01	18.19	9.15	0.03	36.22	4.67	0.15	221.47
27-Jul	37.27	0.17	157.66	0.00	0.01	18.19	65.68	0.09	101.90	34.09	0.17	255.55
28-Jul	0.00	0.17	157.66	4.47	0.02	22.66	30.45	0.11	132.35	14.15	0.18	269.70
29-Jul	97.63	0.27	255.29	0.00	0.02	22.66	1.62	0.11	133.97	52.13	0.21	321.83
30-Jul	30.81	0.30	286.10	0.00	0.02	22.66	29.59	0.14	163.56	16.13	0.22	337.96
31-Jul	4.66	0.31	290.76	0.00	0.02	22.66	103.46	0.23	267.02	147.38	0.27	485.34 ^a
1-Aug	4.74	0.31	295.50	0.00	0.02	22.66	36.99	0.26	304.01	34.10	0.32	519.44
2-Aug	6.00	0.32	301.50	21.64	0.03	44.30	47.70	0.30	351.71	34.60	0.36	554.04
3-Aug	1.67	0.32	303.17	26.28	0.05	70.58	18.91	0.31	370.62	46.34	0.39	600.37
4-Aug	0.00	0.32	303.17	0.00	0.05	70.58	3.33	0.32	373.95	37.01	0.42	637.38
5-Aug	4.66	0.33	307.83	0.00	0.05	70.58	4.29	0.32	378.24	39.23	0.43	676.61
6-Aug	0.00	0.33	307.83	123.61	0.15	194.19	4.56	0.32	382.80	115.84	0.49	792.45
7-Aug	12.31	0.34	320.14	136.25	0.25	330.44	29.01	0.35	411.81	54.03	0.52	846.48
8-Aug	7.69	0.35	327.83	8.79	0.26	339.23	1.62	0.35	413.43	27.29	0.56	873.77
9-Aug	7.58	0.36	335.41	1.54	0.26	340.77	3.08	0.35	416.51	38.84	0.59	912.61
10-Aug	0.00	0.36	335.41	2.86	0.26	343.63	1.50	0.35	418.01	29.33	0.62	941.94
11-Aug	3.00	0.36	338.41	18.54	0.27	362.16	0.00	0.35	418.01	13.06	0.62	955.00
12-Aug	183.75	0.55	522.16	183.91	0.41	546.07	17.89	0.37	435.90	72.68	0.69	1,027.68
13-Aug	0.00	0.55	522.16	244.95	0.60	791.01	409.38	0.72	845.28	39.76	0.72	1,067.43 ^a
14-Aug	0.00	0.55	522.16	3.08	0.60	794.09	52.61	0.76	897.89	13.21	0.73	1,080.64
15-Aug	61.33	0.62	583.49	4.50	0.60	798.59	10.77	0.77	908.66	69.82	0.78	1,150.45
16-Aug	20.43	0.64	603.92	0.00	0.60	798.59	15.08	0.78	923.74	75.12	0.83	1,225.57
17-Aug	47.44	0.69	651.36	1.54	0.60	800.13	0.00	0.78	923.74	18.16	0.85	1,243.73
18-Aug	18.19	0.71	669.55	5.85	0.61	805.98	7.25	0.79	930.99	24.56	0.86	1,268.29
19-Aug	114.22	0.83	783.77	13.17	0.62	819.15	12.99	0.80	943.98	36.95	0.88	1,305.25
20-Aug	49.20	0.88	832.97	0.00	0.62	819.15	0.00	0.80	943.98	12.06	0.89	1,317.31
21-Aug	9.00	0.89	841.97	0.00	0.62	819.15	0.00	0.80	943.98	8.75	0.90	1,326.06
22-Aug	0.00	0.89	841.97	0.00	0.62	819.15	36.17	0.83	980.15	5.76	0.90	1,331.82
23-Aug	33.77	0.93	875.74	18.89	0.63	838.04	1.46	0.83	981.61	19.09	0.92	1,350.91
24-Aug	20.00	0.95	895.74	181.53	0.77	1,019.58	14.35	0.84	995.96	38.31	0.95	1,389.22
25-Aug	0.00	0.95	895.74	149.62	0.88	1,169.20	50.90	0.89	1,046.86	26.82	0.96	1,416.04
26-Aug	6.92	0.96	902.66	38.64	0.91	1,207.84	77.35	0.95	1,124.21	11.03	0.98	1,427.07
27-Aug	30.06	0.99	932.72	3.00	0.91	1,210.84	53.37	1.00	1,177.58	9.50	0.98	1,436.57
28-Aug	10.50	1.00	943.22	117.31	1.00	1,328.15	4.62	1.00	1,182.20	21.87	1.00	1,458.43
29-Aug	–	–	943.22	–	–	1,328.15	–	1.00	1,182.20	19.50	1.00	1,461.22
Total	943.22			1,328.15			1,182.20					

Note: The box indicates the first quartile to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date per range. Differences in the termination dates of the project confound computation of the cumulative percent and average. As a convenience, the historical daily cumulative and average was computed by assuming that 100% of the run was completed on the date of project termination.

Appendix A4.—Historical fall chum salmon CPUE data at the Middle Mouth drift gillnet test fishery site, 2001–2008.

Date	2001			2002			2003			2004		
	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index
16-Jul	4.94	0.00	4.94	0.00	0.00	0.00	50.02	0.04	50.02	0.00	0.00	0.00
17-Jul	127.62	0.09	132.56	2.93	0.01	2.93	36.65	0.08	86.67	0.00	0.00	0.00
18-Jul	206.17	0.23	338.73	0.00	0.01	2.93	3	0.08	89.67	1.43	0.00	1.43
19-Jul	38.69	0.25	377.42	6.01	0.03	8.94	0	0.08	89.67	33.41	0.04	34.84
20-Jul	3.00	0.26	380.42	0.00	0.03	8.94	1.54	0.08	91.21	24.00	0.06	58.84
21-Jul	6.00	0.26	386.42	1.46	0.04	10.40	46.75	0.12	137.96	23.15	0.08	81.99
22-Jul	4.50	0.26	390.92	0.00	0.04	10.40	75.26	0.19	213.22	8.97	0.09	90.96
23-Jul	21.82	0.28	412.74	0.00	0.04	10.40	28.52	0.21	241.74	1.62	0.09	92.58
24-Jul	93.73	0.34	506.47	0.00	0.04	10.40	19.5	0.23	261.24	0.00	0.09	92.58
25-Jul	59.88	0.38	566.35	0.00	0.04	10.40	4.58	0.24	265.82	0.00	0.09	92.58
26-Jul	7.00	0.39	573.35	3.30	0.05	13.70	0	0.24	265.82	3.08	0.10	95.66
27-Jul	4.66	0.39	578.01	1.54	0.06	15.24	6.33	0.24	272.15	3.09	0.10	98.75
28-Jul	1.58	0.39	579.59	1.54	0.06	16.78	44.08	0.28	316.23	0.00	0.10	98.75
29-Jul	1.54	0.39	581.13	9.23	0.10	26.01	30.77	0.31	347.00	1.46	0.10	100.21
30-Jul	3.08	0.39	584.21	3.08	0.11	29.09	0	0.31	347.00	0.00	0.10	100.21
31-Jul	110.52	0.47	694.73	0.00	0.11	29.09	1.67	0.31	348.67	0.00	0.10	100.21
1-Aug	78.45	0.52	773.18	3.08	0.12	32.17	9.65	0.32	358.32	161.80	0.26	262.01
2-Aug	76.26	0.57	849.44	1.54	0.12	33.71	1.5	0.32	359.82	89.39	0.36	351.40
3-Aug	139.14	0.67	988.58	3.00	0.14	36.71	186.74	0.48	546.56	36.19	0.39	387.59
4-Aug	26.32	0.69	1,014.90	1.54	0.14	38.25	119.74	0.59	666.30	24.12	0.42	411.71
5-Aug	1.58	0.69	1,016.48	0.00	0.14	38.25	22.33	0.61	688.63	4.43	0.42	416.14
6-Aug	30.78	0.71	1,047.26	0.00	0.14	38.25	0	0.61	688.63	7.58	0.43	423.72
7-Aug	173.08	0.82	1,220.34	1.54	0.15	39.79	0	0.61	688.63	3.08	0.43	426.80
8-Aug	62.91	0.87	1,283.25	0.00	0.15	39.79	0	0.61	688.63	16.93	0.45	443.73
9-Aug	27.09	0.88	1,310.34	7.50	0.17	47.29	0	0.61	688.63	52.56	0.50	496.29
10-Aug	8.18	0.89	1,318.52	1.50	0.18	48.79	1.43	0.61	690.06	25.85	0.53	522.14
11-Aug	4.46	0.89	1,322.98	7.78	0.21	56.57	1.43	0.61	691.49	3.08	0.53	525.22
12-Aug	24.02	0.91	1,347.00	4.39	0.23	60.96	64.84	0.67	756.33	0.00	0.53	525.22
13-Aug	50.50	0.94	1,397.50	18.63	0.29	79.59	0	0.67	756.33	1.50	0.53	526.72
14-Aug	33.02	0.97	1,430.52	3.25	0.31	82.84	54.83	0.72	811.16	46.48	0.58	573.20
15-Aug	22.46	0.98	1,452.98	0.00	0.31	82.84	164.48	0.87	975.64	20.87	0.60	594.07
16-Aug	7.51	0.99	1,460.49	121.14	0.75	203.98	52.18	0.91	1,027.82	0.00	0.60	594.07
17-Aug	1.54	0.99	1,462.03	32.41	0.87	236.39	20.46	0.93	1,048.28	2.96	0.60	597.03
18-Aug	4.58	0.99	1,466.61	13.45	0.92	249.84	4.82	0.93	1,053.10	2.93	0.61	599.96
19-Aug	0.00	0.99	1,466.61	7.03	0.95	256.87	0	0.93	1,053.10	0.00	0.61	599.96
20-Aug	1.58	0.99	1,468.19	5.70	0.97	262.57	4.66	0.94	1,057.76	232.53	0.84	832.49
21-Aug	5.71	0.99	1,473.90	3.04	0.98	265.61	0	0.94	1,057.76	39.20	0.88	871.69
22-Aug	6.00	1.00	1,479.90	3.18	0.99	268.79	39.25	0.97	1,097.01	0.00	0.88	871.69
23-Aug	0.00	1.00	1,479.90	1.50	1.00	270.29	10.59	0.98	1,107.60	0.00	0.88	871.69
24-Aug	1.54	1.00	1,481.44	0.00	1.00	270.29	14.97	1.00	1,122.57	0.00	0.88	871.69
25-Aug	0.00	1.00	1,481.44	0.00	1.00	270.29	0	1.00	1,122.57	20.64	0.90	892.33
26-Aug	0.00	1.00	1,481.44	0.00	1.00	270.29	4.66	1.00	1,127.23	17.61	0.92	909.94
27-Aug	0.00	1.00	1,481.44	0.00	1.00	270.29	—	1.00	1,127.23	79.57	1.00	989.51
28-Aug	0.00	1.00	1,481.44	0.00	1.00	270.29	—	1.00	1,127.23	0.00	1.00	989.51
29-Aug	—	1,481.44	—	270.29	—	1,127.23	—	1,127.23	—	—	—	989.51
Total	1,481.44		270.29		1,127.23				989.51			

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Appendix A4.–Page 2 of 2.

Date	2005			2006			2007			2008			Average 2001–2007		
	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index	Daily Index	Cumulative %	Index
16-Jul	14.98	0.01	14.98	64.93	0.05	64.93	3.33	0.01	3.33	6	0.01	6.00	19.74	0.02	19.74
17-Jul	4.74	0.02	19.72	10.06	0.06	74.99	11.34	0.02	14.67	12.31	0.04	18.31	27.62	0.04	47.36
18-Jul	3.08	0.02	22.80	1.62	0.06	76.61	2.96	0.03	17.63	4.5	0.05	22.81	31.18	0.06	78.54
19-Jul	13.62	0.03	36.42	1.71	0.06	78.32	0.00	0.03	17.63	0	0.05	22.81	13.35	0.07	91.89
20-Jul	19.38	0.05	55.80	0.00	0.06	78.32	3.08	0.03	20.71	0	0.05	22.81	7.29	0.08	99.18
21-Jul	3.04	0.05	58.84	3.38	0.06	81.70	6.04	0.04	26.75	5.93	0.07	28.74	12.83	0.09	112.01
22-Jul	0.00	0.05	58.84	0.00	0.06	81.70	0.00	0.04	26.75	9.08	0.09	37.82	12.68	0.11	124.68
23-Jul	1.43	0.05	60.27	0.00	0.06	81.70	0.00	0.04	26.75	15.98	0.12	53.80	7.63	0.11	132.31
24-Jul	0.00	0.05	60.27	0.00	0.06	81.70	1.46	0.04	28.21	22.17	0.17	75.97	16.38	0.12	148.70
25-Jul	0.00	0.05	60.27	14.48	0.07	96.18	0.00	0.04	28.21	15	0.21	90.97	11.28	0.13	159.97
26-Jul	0.00	0.05	60.27	0.00	0.07	96.18	1.46	0.04	29.68	7.82	0.23	98.79	2.12	0.13	162.09
27-Jul	1.43	0.05	61.70	117.41	0.16	213.59	1.54	0.05	31.22	12.31	0.25	111.10	19.43	0.15	181.52
28-Jul	0.00	0.05	61.70	178.62	0.29	392.21	3.00	0.05	34.22	44	0.35	155.10	32.69	0.18	214.21
29-Jul	40.43	0.09	102.13	66.18	0.34	458.39	0.00	0.05	34.22	2.96	0.36	158.06	21.37	0.20	235.58
30-Jul	17.50	0.10	119.63	143.31	0.44	601.70	1.54	0.05	35.75	40.97	0.45	199.03	24.07	0.22	259.66
31-Jul	13.94	0.12	133.57	61.73	0.49	663.43	0.00	0.05	35.75	40.74	0.55	239.77	26.84	0.24	286.49 ^a
1-Aug	3.04	0.12	136.61	90.51	0.56	753.94	0.00	0.05	35.75	28.18	0.61	267.95	49.50	0.28	336.00
2-Aug	0.00	0.12	136.61	30.95	0.58	784.89	1.54	0.06	37.29	23.21	0.67	291.16	28.74	0.30	364.74
3-Aug	2.96	0.12	139.57	3.10	0.58	787.99	0.00	0.06	37.29	20.96	0.71	312.12	53.02	0.35	417.76
4-Aug	1.50	0.12	141.07	5.47	0.58	793.46	1.54	0.06	38.83	4.7	0.72	316.82	25.75	0.37	443.50
5-Aug	3.00	0.13	144.07	19.32	0.60	812.78	1.46	0.06	40.29	1.54	0.73	318.36	7.45	0.38	450.95
6-Aug	0.00	0.13	144.07	56.71	0.64	869.49	98.18	0.21	138.47	0	0.73	318.36	27.61	0.41	478.56
7-Aug	117.59	0.23	261.66	13.24	0.65	882.73	138.11	0.42	276.59	1.54	0.73	319.90	63.81	0.47	542.36
8-Aug	67.15	0.29	328.81	10.45	0.66	893.18	121.16	0.60	397.75	1.43	0.73	321.33	39.80	0.52	582.16
9-Aug	27.65	0.31	356.46	0.00	0.66	893.18	4.50	0.61	402.25	0	0.73	321.33	17.04	0.54	599.21
10-Aug	1.50	0.31	357.96	0.00	0.66	893.18	3.00	0.61	405.25	0	0.73	321.33	5.92	0.54	605.13
11-Aug	9.00	0.32	366.96	0.00	0.66	893.18	0.00	0.61	405.25	1.54	0.74	322.87	3.68	0.55	608.81
12-Aug	10.94	0.33	377.90	186.52	0.80	1,079.70	1.50	0.61	406.75	0	0.74	322.87	41.74	0.58	650.55
13-Aug	3.12	0.33	381.02	63.03	0.84	1,142.73	54.38	0.69	461.13	9.23	0.76	332.10	27.31	0.62	677.86
14-Aug	41.23	0.37	422.25	15.79	0.85	1,158.52	62.00	0.79	523.13	11.85	0.79	343.95	36.66	0.65	714.52
15-Aug	4.62	0.37	426.87	12.63	0.86	1,171.15	9.73	0.80	532.86	4.82	0.80	348.77	33.54	0.68	748.06
16-Aug	1.50	0.37	428.37	1.62	0.86	1,172.77	16.98	0.83	549.84	0	0.80	348.77	28.70	0.76	776.76
17-Aug	0.00	0.37	428.37	16.67	0.88	1,189.44	13.66	0.85	563.50	0	0.80	348.77	12.53	0.78	789.29
18-Aug	10.47	0.38	438.84	12.08	0.89	1,201.52	5.90	0.86	569.40	0	0.80	348.77	7.75	0.80	797.04
19-Aug	15.00	0.40	453.84	69.98	0.94	1,271.50	2.93	0.86	572.32	0	0.80	348.77	13.56	0.81	810.60
20-Aug	73.44	0.46	527.28	18.83	0.95	1,290.33	3.17	0.87	575.49	3.24	0.80	352.01	48.56	0.86	859.16
21-Aug	73.84	0.53	601.12	6.53	0.96	1,296.86	1.71	0.87	577.20	4.54	0.81	356.55	18.58	0.88	877.73 ^a
22-Aug	118.69	0.63	719.81	1.67	0.96	1,298.53	1.46	0.87	578.67	24.45	0.87	381.00	24.32	0.90	902.06
23-Aug	240.29	0.84	960.10	8.12	0.96	1,306.65	1.50	0.87	580.17	10.32	0.89	391.32	37.43	0.93	939.49
24-Aug	80.67	0.91	1,040.77	10.96	0.97	1,317.61	4.50	0.88	584.67	4.36	0.90	395.68	16.09	0.95	955.58
25-Aug	28.32	0.93	1,069.09	5.00	0.97	1,322.61	43.94	0.95	628.61	3	0.91	398.68	13.99	0.96	969.56
26-Aug	22.87	0.95	1,091.96	3.08	0.98	1,325.69	18.31	0.97	646.91	22.52	0.96	421.20	9.50	0.97	979.07
27-Aug	0.00	0.95	1,091.96	24.87	1.00	1,350.56	6.24	0.98	653.16	13.59	0.99	434.79	18.45	0.99	994.88
28-Aug	4.46	0.96	1,096.42	6.72	1.00	1,357.28	11.23	1.00	664.39	3.04	1.00	437.83	3.74	0.99	998.08
29-Aug	47.67	1.00	1,144.09	—	—	1,357.28	—	—	—	-	1.00	437.83	47.67	1.00	1,061.64
Total	1,144.09			1,357.28			664.39			437.83					

Note: The box indicates the first quartile to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date range. Differences in the termination dates of the project confound computation of the cumulative percent and average. As a convenience, the historical daily cumulative and average was computed by assuming that 100% of the run was completed on the date of project termination.

Appendix A5.—Species captured, retained and released during the Lower Yukon gillnet test fishery, 2008.

Species	Big Eddy		Middle Mouth		Total	
	Fall Chum	Coho	Fall Chum	Coho	Fall Chum	Coho
Fish released unharmed	15	0	74	35	89	35
Test fish sales	0	0	0	0	0	0
Fish discarded	0	0	0	0	0	0
Test fish donated locally	690	170	188	63	432	97
Total catch	705	170	262	98	967	268

Appendix A6.—Historical coho salmon CPUE data at the Big Eddy drift gillnet test fishery site, 2001–2008.

Date	2001			2002			2003			2004		
	Daily Index	Cumulative %	Index									
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.00	1.58	0.00	0.00	0.00
23-Jul	3.00	0.01	3.00	0.00	0.00	0.00	1.67	0.00	3.25	0.00	0.00	0.00
24-Jul	0.00	0.01	3.00	0.00	0.00	0.00	0	0.00	3.25	0.00	0.00	0.00
25-Jul	0.00	0.01	3.00	0.00	0.00	0.00	0	0.00	3.25	0.00	0.00	0.00
26-Jul	0.00	0.01	3.00	0.00	0.00	0.00	0	0.00	3.25	1.43	0.01	1.43
27-Jul	1.50	0.02	4.50	0.00	0.00	0.00	23.89	0.04	27.14	0.00	0.01	1.43
28-Jul	0.00	0.02	4.50	0.00	0.00	0.00	1.62	0.04	28.76	0.00	0.01	1.43
29-Jul	0.00	0.02	4.50	0.00	0.00	0.00	1.58	0.04	30.34	0.00	0.01	1.43
30-Jul	1.50	0.02	6.00	0.00	0.00	0.00	0	0.04	30.34	0.00	0.01	1.43
31-Jul	4.67	0.04	10.67	0.00	0.00	0.00	1.58	0.05	31.92	0.00	0.01	1.43
1-Aug	0.00	0.04	10.67	4.07	0.01	4.07	1.62	0.05	33.54	2.69	0.04	4.12
2-Aug	5.31	0.06	15.98	0.00	0.01	4.07	0	0.05	33.54	12.67	0.16	16.79
3-Aug	12.81	0.11	28.79	4.40	0.02	8.47	63.3	0.14	96.84	0.00	0.16	16.79
4-Aug	7.34	0.13	36.13	0.00	0.02	8.47	76.98	0.25	173.82	0.00	0.16	16.79
5-Aug	9.82	0.17	45.95	0.00	0.02	8.47	8.7	0.27	182.52	0.00	0.16	16.79
6-Aug	16.84	0.23	62.79	0.00	0.02	8.47	0	0.27	182.52	0.00	0.16	16.79
7-Aug	64.60	0.47	127.39	6.44	0.04	14.91	0	0.27	182.52	0.00	0.16	16.79
8-Aug	13.33	0.52	140.72	10.35	0.06	25.26	0	0.27	182.52	9.35	0.25	26.14
9-Aug	11.78	0.56	152.50	28.89	0.13	54.15	8.58	0.28	191.1	1.50	0.27	27.64
10-Aug	28.88	0.66	181.38	19.12	0.18	73.27	23.66	0.31	214.76	1.46	0.28	29.10
11-Aug	9.95	0.70	191.33	15.37	0.22	88.64	6.24	0.32	221	0.00	0.28	29.10
12-Aug	37.47	0.84	228.80	22.18	0.27	110.82	21.67	0.35	242.67	1.28	0.29	30.38
13-Aug	4.11	0.85	232.91	16.84	0.32	127.66	0	0.35	242.67	5.08	0.34	35.46
14-Aug	6.08	0.88	238.99	5.81	0.33	133.47	71.85	0.46	314.52	0.00	0.34	35.46
15-Aug	3.04	0.89	242.03	38.45	0.43	171.92	248.71	0.82	563.23	0.00	0.34	35.46
16-Aug	3.04	0.90	245.07	168.01	0.84	339.93	25.04	0.86	588.27	0.00	0.34	35.46
17-Aug	0.00	0.90	245.07	18.88	0.89	358.81	0	0.86	588.27	1.28	0.35	36.74
18-Aug	6.19	0.92	251.26	14.40	0.92	373.21	11.82	0.88	600.09	0.00	0.35	36.74
19-Aug	0.00	0.92	251.26	11.05	0.95	384.26	0	0.88	600.09	0.00	0.35	36.74
20-Aug	0.00	0.92	251.26	1.43	0.96	385.69	0	0.88	600.09	9.16	0.44	45.90
21-Aug	11.11	0.96	262.37	1.58	0.96	387.27	18.69	0.90	618.78	0.00	0.44	45.90
22-Aug	8.93	0.99	271.30	9.36	0.98	396.63	6.4	0.91	625.18	0.00	0.44	45.90
23-Aug	0.00	0.99	271.30	0.00	0.98	396.63	35.98	0.97	661.16	1.46	0.46	47.36
24-Aug	0.00	0.99	271.30	3.24	0.99	399.87	8.92	0.98	670.08	3.00	0.48	50.36
25-Aug	0.00	0.99	271.30	0.00	0.99	399.87	6	0.99	676.08	3.00	0.51	53.36
26-Aug	0.00	0.99	271.30	2.05	1.00	401.92	1.67	0.99	677.75	6.85	0.58	60.21
27-Aug	0.00	0.99	271.30	1.58	1.00	403.50	0	0.99	677.75	43.63	1.00	103.84
28-Aug	1.50	1.00	272.80	0.00	1.00	403.50	6.32	1.00	684.07	0.00	1.00	103.84
29-Aug	—	—	272.80	—	—	403.50	—	—	684.07	—	—	103.84
Total	272.80		403.50			684.07			103.84			

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Appendix A6.–Page 2 of 2.

Date	2005			2006			2007			2008			Average 2001–2007		
	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	1.33	0.00	0.00	0.00	0.19	0.00	0.19
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.19
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.19
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.19
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.19
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.23	0.00	0.42
23-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.67	0.00	1.08
24-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	1.08
25-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	1.08
26-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	1.43	0.00	1.43	0.20	0.00	1.29
27-Jul	0.00	0.00	0.00	1.36	0.01	1.36	0.00	0.00	1.33	0.00	0.00	1.43	3.82	0.01	5.11
28-Jul	0.00	0.00	0.00	3.00	0.02	4.36	0.00	0.00	1.33	3.00	0.01	4.43	0.66	0.01	5.77
29-Jul	7.27	0.02	7.27	11.36	0.09	15.72	0.00	0.00	1.33	0.00	0.01	4.43	2.89	0.03	8.66
30-Jul	1.82	0.03	9.09	3.43	0.10	19.15	2.93	0.01	4.26	3.39	0.03	7.82	1.38	0.03	10.04
31-Jul	13.36	0.07	22.45	0.00	0.10	19.15	0.00	0.01	4.26	7.67	0.05	15.49	2.80	0.04	12.84
1-Aug	6.22	0.09	28.67	0.00	0.10	19.15	1.50	0.01	5.76	2.22	0.06	17.71	2.30	0.05	15.14
2-Aug	1.46	0.10	30.13	1.50	0.11	20.65	22.04	0.07	27.80	4.86	0.08	22.57	6.14	0.08	21.28
3-Aug	1.43	0.10	31.56	0.00	0.11	20.65	10.43	0.09	38.23	1.58	0.08	24.15	13.20	0.11	34.48
4-Aug	0.00	0.10	31.56	0.00	0.11	20.65	0.00	0.09	38.23	3.21	0.09	27.36	12.05	0.13	46.52
5-Aug	5.30	0.12	36.86	6.36	0.15	27.01	0.00	0.09	38.23	0.00	0.09	27.36	4.31	0.14	50.83
6-Aug	39.74	0.25	76.60	0.00	0.15	27.01	32.17	0.17	70.40	9.22	0.12	36.58	12.68	0.18	63.51
7-Aug	33.15	0.36	109.75	1.54	0.16	28.55	28.02	0.24	98.42	16.27	0.18	52.85	19.11	0.24	82.62
8-Aug	23.93	0.44	133.68	0.00	0.16	28.55	0.00	0.24	98.42	0.00	0.18	52.85	8.14	0.28	90.76
9-Aug	8.00	0.47	141.68	0.00	0.16	28.55	1.54	0.24	99.96	1.54	0.18	54.39	8.61	0.30	99.37
10-Aug	7.32	0.49	149.00	3.16	0.17	31.71	1.40	0.24	101.35	0.00	0.18	54.39	12.14	0.34	111.51
11-Aug	8.36	0.52	157.36	0.00	0.17	31.71	17.64	0.29	118.99	0.00	0.18	54.39	8.22	0.36	119.73
12-Aug	8.13	0.55	165.49	18.65	0.27	50.36	80.94	0.48	199.94	11.85	0.22	66.24	27.19	0.44	146.92
13-Aug	0.00	0.55	165.49	3.16	0.29	53.52	124.30	0.78	324.23	37.69	0.35	103.93	21.93	0.50	168.85
14-Aug	14.19	0.59	179.68	1.62	0.30	55.14	12.31	0.81	336.54	31.39	0.46	135.32	15.98	0.53	184.83
15-Aug	9.35	0.63	189.03	25.15	0.44	80.29	0.00	0.81	336.54	7.69	0.48	143.01	46.39	0.62	231.21
16-Aug	2.82	0.64	191.85	1.76	0.45	82.05	0.00	0.81	336.54	9.08	0.51	152.09	28.67	0.69	259.88
17-Aug	12.34	0.68	204.19	25.57	0.59	107.62	3.08	0.82	339.62	0.00	0.51	152.09	8.74	0.73	268.62
18-Aug	20.32	0.74	224.51	5.85	0.62	113.47	2.96	0.83	342.58	4.29	0.53	156.38	8.79	0.75	277.41
19-Aug	27.58	0.83	252.09	18.21	0.72	131.68	4.39	0.84	346.97	21.70	0.60	178.08	8.75	0.78	286.16
20-Aug	4.36	0.85	256.45	13.18	0.79	144.86	0.00	0.84	346.97	3.04	0.61	181.12	4.02	0.81	290.17
21-Aug	1.40	0.85	257.85	4.50	0.81	149.36	0.00	0.84	346.97	1.50	0.62	182.62	5.33	0.82	295.50
22-Aug	1.50	0.86	259.35	0.00	0.81	149.36	0.00	0.84	346.97	16.37	0.67	198.99	3.74	0.83	299.24
23-Aug	4.62	0.87	263.97	5.58	0.84	154.94	1.11	0.84	348.08	0.00	0.67	198.99	6.96	0.85	306.21
24-Aug	7.62	0.90	271.59	2.79	0.86	157.73	10.29	0.87	358.37	9.49	0.70	208.48	5.12	0.87	311.33
25-Aug	6.79	0.92	278.38	0.00	0.86	157.73	16.25	0.91	374.63	52.64	0.88	261.12	4.58	0.88	315.91
26-Aug	7.62	0.95	286.00	16.86	0.95	174.59	22.86	0.96	397.49	18.97	0.95	280.09	8.27	0.92	324.18
27-Aug	7.06	0.97	293.06	0.00	0.95	174.59	1.54	0.96	399.02	14.24	0.99	294.33	7.69	0.98	331.87
28-Aug	1.46	0.98	294.52	9.04	1.00	183.63	14.69	1.00	413.71	1.54	1.00	295.87	4.72	1.00	336.58
29-Aug	7.50	1.00	302.02	—	—	183.63	—	—	—	—	1.00	295.87	7.50	1.00	324.98
Total	302.02		183.63			413.71			295.87						

Note: The box indicates the first quartile to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date range. Differences in the termination dates of the project confound computation of the cumulative percent and average. As a convenience, the historical daily cumulative and average was computed by assuming that 100% of the run was completed on the date of project termination.

Appendix A7.—Historical coho salmon CPUE data at the Middle Mouth drift gillnet test fishery site, 2001–2008.

Date	2001			2002			2003			2004		
	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
23-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
24-Jul	1.76	0.00	1.76	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
25-Jul	0.00	0.00	1.76	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
26-Jul	0.00	0.00	1.76	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
27-Jul	0.00	0.00	1.76	0.00	0.00	0.00	0	0.00	0	0.00	0.00	0.00
28-Jul	0.00	0.00	1.76	0.00	0.00	0.00	4.53	0.01	4.53	0.00	0.00	0.00
29-Jul	0.00	0.00	1.76	0.00	0.00	0.00	8.95	0.02	13.48	0.00	0.00	0.00
30-Jul	0.00	0.00	1.76	0.00	0.00	0.00	0	0.02	13.48	0.00	0.00	0.00
31-Jul	1.43	0.01	3.19	0.00	0.00	0.00	0	0.02	13.48	0.00	0.00	0.00
1-Aug	0.00	0.01	3.19	0.00	0.00	0.00	3.16	0.02	16.64	0.00	0.00	0.00
2-Aug	4.40	0.01	7.59	0.00	0.00	0.00	0	0.02	16.64	3.33	0.01	3.33
3-Aug	13.76	0.04	21.35	0.00	0.00	0.00	47.92	0.09	64.56	13.33	0.03	16.66
4-Aug	12.35	0.07	33.70	0.00	0.00	0.00	58.69	0.17	123.25	0.00	0.03	16.66
5-Aug	1.58	0.07	35.28	1.43	0.00	1.43	13.17	0.18	136.42	1.54	0.04	18.20
6-Aug	19.22	0.11	54.50	0.00	0.00	1.43	0	0.18	136.42	0.00	0.04	18.20
7-Aug	36.15	0.18	90.65	4.62	0.02	6.05	1.54	0.19	137.96	0.00	0.04	18.20
8-Aug	30.31	0.23	120.96	0.00	0.02	6.05	0	0.19	137.96	0.00	0.04	18.20
9-Aug	16.37	0.27	137.33	4.50	0.03	10.55	1.71	0.19	139.67	38.44	0.12	56.64
10-Aug	26.62	0.32	163.95	0.00	0.03	10.55	1.62	0.19	141.29	27.29	0.17	83.93
11-Aug	20.86	0.36	184.81	36.92	0.13	47.47	9	0.20	150.29	10.77	0.19	94.70
12-Aug	19.74	0.40	204.55	8.97	0.16	56.44	45.38	0.26	195.67	1.50	0.20	96.20
13-Aug	58.93	0.51	263.48	27.00	0.23	83.44	6.16	0.27	201.83	2.96	0.20	99.16
14-Aug	50.37	0.61	313.85	4.86	0.24	88.30	35.5	0.32	237.33	51.37	0.31	150.53
15-Aug	65.52	0.74	379.37	1.58	0.25	89.88	274.56	0.69	511.89	10.51	0.33	161.04
16-Aug	24.11	0.78	403.48	37.71	0.35	127.59	57.79	0.77	569.68	4.79	0.34	165.83
17-Aug	22.27	0.82	425.75	73.08	0.56	200.67	21.82	0.80	591.5	11.93	0.36	177.76
18-Aug	12.27	0.85	438.02	53.70	0.70	254.37	15.92	0.82	607.42	18.02	0.40	195.78
19-Aug	31.19	0.91	469.21	34.44	0.80	288.81	4.74	0.83	612.16	4.72	0.41	200.50
20-Aug	4.70	0.92	473.91	19.74	0.86	308.55	4.74	0.83	616.9	28.28	0.47	228.78
21-Aug	11.43	0.94	485.34	6.04	0.87	314.59	1.58	0.84	618.48	117.49	0.71	346.27
22-Aug	20.07	0.98	505.41	26.38	0.94	340.97	83.27	0.95	701.75	3.04	0.71	349.31
23-Aug	3.08	0.99	508.49	6.08	0.96	347.05	13.54	0.97	715.29	1.50	0.71	350.81
24-Aug	4.58	0.99	513.07	3.00	0.97	350.05	17.44	0.99	732.73	0.00	0.71	350.81
25-Aug	0.00	0.99	513.07	1.54	0.97	351.59	1.58	0.99	734.31	20.49	0.76	371.30
26-Aug	2.93	1.00	516.00	0.00	0.97	351.59	4.66	1.00	738.97	15.72	0.79	387.02
27-Aug	0.00	1.00	516.00	0.00	0.97	351.59	1.00	738.97	104.03	1.00	491.05	
28-Aug	0.12	1.00	516.12	9.23	1.00	360.82	1.00	738.97	0.00	1.00	491.05	
29-Aug	—	—	516.12	—	—	360.82	—	738.97	—	—	491.05	
Total	516.12			360.82			738.97			491.05		

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Appendix A7.–Page 2 of 2.

Date	2005			2006			2007			2008			Average 2001–2007		
	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index	Daily Index	Cumulative %	Cumulative Index
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25
25-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
26-Jul	0.00	0.00	0.00	1.67	0.01	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.49
27-Jul	0.00	0.00	0.00	3.94	0.03	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	1.05
28-Jul	0.00	0.00	0.00	0.00	0.03	5.61	1.50	0.00	1.50	2.93	0.02	2.93	0.86	0.01	1.91
29-Jul	0.00	0.00	0.00	0.98	0.03	6.59	0.00	0.00	1.50	1.43	0.03	4.36	1.42	0.01	3.33
30-Jul	4.43	0.01	4.43	13.17	0.10	19.76	0.00	0.00	1.50	1.58	0.04	5.94	2.51	0.02	5.85
31-Jul	0.00	0.01	4.43	7.95	0.14	27.71	1.54	0.01	3.04	0.00	0.04	5.94	1.56	0.03	7.41
1-Aug	0.00	0.01	4.43	7.37	0.18	35.08	0.00	0.01	3.04	1.58	0.05	7.52	1.50	0.03	8.91
2-Aug	0.00	0.01	4.43	0.00	0.18	35.08	0.00	0.01	3.04	0.00	0.05	7.52	1.10	0.04	10.02
3-Aug	1.46	0.02	5.89	2.05	0.19	37.13	1.46	0.01	4.50	3.00	0.07	10.52	11.43	0.06	21.44
4-Aug	0.00	0.02	5.89	0.00	0.19	37.13	3.00	0.02	7.50	0.00	0.07	10.52	10.58	0.07	32.02
5-Aug	0.00	0.02	5.89	0.00	0.19	37.13	8.89	0.04	16.39	1.46	0.08	11.98	3.80	0.08	35.82
6-Aug	0.00	0.02	5.89	0.00	0.19	37.13	17.68	0.09	34.07	0.00	0.08	11.98	5.27	0.09	41.09
7-Aug	38.93	0.15	44.82	1.00	0.20	38.13	44.42	0.20	78.49	0.00	0.08	11.98	18.09	0.14	59.19
8-Aug	9.72	0.18	54.54	2.22	0.21	40.35	55.96	0.34	134.45	4.51	0.11	16.49	14.03	0.17	73.22
9-Aug	3.25	0.19	57.79	1.33	0.22	41.68	1.50	0.34	135.95	2.86	0.12	19.35	9.59	0.19	82.80
10-Aug	1.50	0.20	59.29	0.00	0.22	41.68	0.00	0.34	135.95	1.50	0.13	20.85	8.15	0.21	90.95
11-Aug	0.00	0.20	59.29	3.21	0.23	44.89	1.50	0.35	137.45	0.00	0.13	20.85	11.75	0.24	102.70
12-Aug	7.78	0.22	67.07	1.76	0.24	46.65	6.00	0.36	143.45	1.62	0.14	22.47	13.02	0.26	115.72
13-Aug	7.69	0.25	74.76	4.44	0.26	51.09	91.79	0.60	235.24	3.08	0.16	25.55	28.42	0.33	144.14
14-Aug	6.65	0.27	81.41	6.40	0.30	57.49	27.00	0.66	262.24	11.29	0.24	36.84	26.02	0.39	170.16
15-Aug	1.62	0.28	83.03	3.16	0.31	60.65	11.04	0.69	273.28	3.11	0.26	39.95	52.57	0.47	222.73
16-Aug	3.16	0.29	86.19	4.86	0.34	65.51	12.39	0.72	285.67	0.00	0.26	39.95	20.69	0.51	243.42
17-Aug	4.80	0.30	90.99	9.73	0.39	75.24	10.89	0.75	296.57	0.00	0.26	39.95	22.07	0.57	265.50
18-Aug	1.46	0.31	92.45	6.09	0.42	81.33	3.00	0.76	299.57	7.25	0.30	47.20	15.78	0.61	281.28
19-Aug	3.00	0.32	95.45	53.46	0.70	134.79	4.43	0.77	303.99	0.00	0.30	47.20	19.43	0.68	300.70
20-Aug	13.21	0.36	108.66	28.30	0.84	163.09	17.32	0.81	321.31	7.78	0.35	54.98	16.61	0.73	317.31
21-Aug	14.87	0.41	123.53	3.33	0.86	166.42	6.86	0.83	328.17	16.77	0.46	71.75	23.09	0.78	340.40
22-Aug	22.50	0.49	146.03	0.00	0.86	166.42	1.46	0.83	329.63	24.98	0.62	96.73	22.39	0.82	362.79
23-Aug	45.00	0.64	191.03	0.00	0.86	166.42	3.00	0.84	332.63	11.93	0.69	108.66	10.31	0.85	373.10
24-Aug	48.00	0.80	239.03	9.26	0.91	175.68	1.50	0.85	334.13	11.82	0.77	120.48	11.97	0.89	385.07
25-Aug	9.31	0.83	248.34	3.38	0.92	179.06	20.49	0.90	354.62	9.08	0.83	129.56	8.11	0.91	393.18
26-Aug	18.41	0.89	266.75	6.33	0.96	185.39	10.65	0.92	365.27	5.58	0.86	135.14	8.39	0.93	401.57
27-Aug	1.50	0.90	268.25	1.58	0.97	186.97	3.17	0.93	368.44	7.66	0.91	142.80	18.38	0.97	417.32
28-Aug	2.96	0.91	271.21	6.72	1.00	193.69	26.88	1.00	395.32	13.77	1.00	156.57	7.65	0.99	423.88
29-Aug	28.23	1.00	299.44	—	193.69	—	—	—	—	1.00	156.57	28.23	1.00	433.35	

Note: The box indicates the first quartile to the third quartile of the cumulative index. The median date of the cumulative index is indicated in the bold box. Shading indicates the historical median passage date range. Differences in the termination dates of the project confound computation of the cumulative percent and average. As a convenience, the historical daily cumulative and average was computed by assuming that 100% of the run was completed on the date of project termination.